

## TABLE TYPE, ELECTRIC

SELF-CONTAINED

3, 6 or 12 GALLONS

(11, 23 or 45 LITERS)

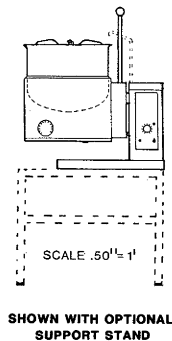
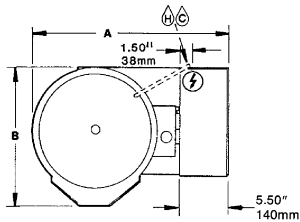
$\frac{2}{3}$  STEAM JACKETED, TILTING

"SPLASH PROOF SERIES"

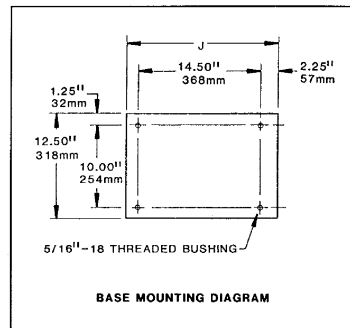
MODELS: ☐ KET- 3-T ☐ KET-12-T  
☐ KET- 6-T

ITEM NUMBER \_\_\_\_\_

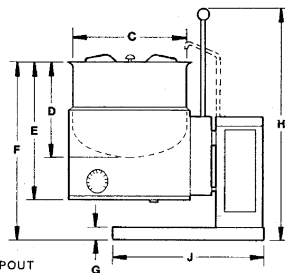
JOB NAME / NUMBER \_\_\_\_\_



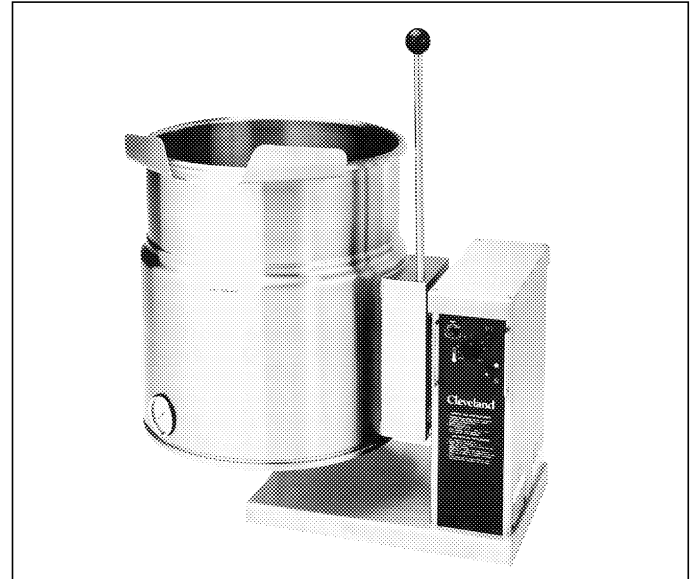
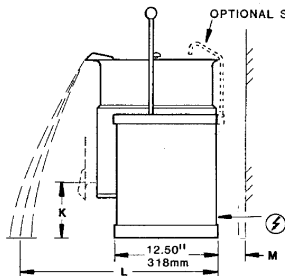
SHOWN WITH OPTIONAL SUPPORT STAND



BASE MOUNTING DIAGRAM



OPTIONAL SWING SPOUT



### SHORT FORM SPECIFICATION

Shall be CLEVELAND, electric kettle, Table Type, self-contained, tilting, Model KET - \_\_\_\_ - T; \_\_\_\_ gallons, \_\_\_\_ KW, \_\_\_\_ volt, \_\_\_\_ Hz, \_\_\_\_ - phase, 3 wire and single phase, 2 wire.  $\frac{2}{3}$  steam jacketed, type 304 Stainless Steel kettle and supports. Jacket rated at 50 psi with Safety Valve. Complete with solid state water level, temperature and safety low water power cut-off, including LED indicators. Lift-off cover, Marine Lock.

GAL	LITERS		A	B	C	D	E	F	G	H	J	K	L	M	N
3	11	IN mm	20.00 508	14.50 368	10.00 254	9.00 229	14.25 362	20.00 508	1.50 38	28.25 718	18.00 457	8.50 216	24.00 610	2.25 57	2.00 343
6	23	IN mm	23.50 597	16.75 425	13.38 340	11.00 279	16.50 419	22.75 578	1.50 38	28.50 724	18.00 457	6.94 176	26.50 673	2.75 70	2.00 343
12	45	IN mm	27.00 686	20.00 508	16.75 425	13.50 343	18.56 471	24.25 616	1.50 38	31.50 800	18.00 457	6.56 167	27.00 686	5.50 140	2.00 375

ELECTRIC ⚡															Dual Voltage of 220 / 380 (shown on chart) require a four wire, three phase electrical supply.						WATER ⚡Ⓢ			CLEARANCE		
ELECTRICAL SUPPLY STANDARD WATTAGE												HIGH WATTAGE														
208 VOLTS			240 VOLTS			480 VOLTS			220/380 VOLTS			208VOLTS			240VOLTS											
CAPACITY	KW	1PH	AMS	KW	AMPS	AMPS	KW	AMPS	AMPS	KW	AMPS	AMPS	KW	PH	AMPS	KW	PH	AMPS								
GALS. LITERS	3PH		1PH	3PH	1PH	3PH	1PH	3PH	3PH	1PH	3PH	3PH	PER LINE		PER LINE	PER LINE		PER LINE								
3	11	4.1	19.7	N/A	5.5	20.7	N/A	5.5	11.4	N/A	N/A	N/A	N/A	—	—	—	—	—								
6	23	6.2	29.6	17.1	8.2	34.0	19.7	9.8	20.5	11.8	6.8	N/A	10.3	9.8	3	27.3	13.0	3	31.5							
12	45	9.8	47.3	27.3	13.0	54.5	31.5	13.1	27.3	15.8	10.9	N/A	16.5	12.3	3	34.2	16.4	3	39.4							

1/2 " O.D.  
copper tube.

RIGHT = 0"  
LEFT = 0"  
REAR = See "M" on  
chart above.

1/2" O.D. copper tube.

RIGHT = 0"  
LEFT = 0"  
REAR = See "M" on chart above.

Cleveland Range reserves right of design improvement or modification, as warranted.

**Cleveland Range Inc.**  
**Ph: 1-216-481-4900 Fx: 1-216-481-3782**

1333 East 179th St., Cleveland, Ohio, U.S.A. 44110  
 Visit our Web Site at **www.clevelandrange.com**



# Steam Jacketed Kettles

## TABLE TYPE, ELECTRIC

SELF-CONTAINED

TWIN: 3, 6 or 12 GALLONS

(11, 23 OR 45 LITERS)

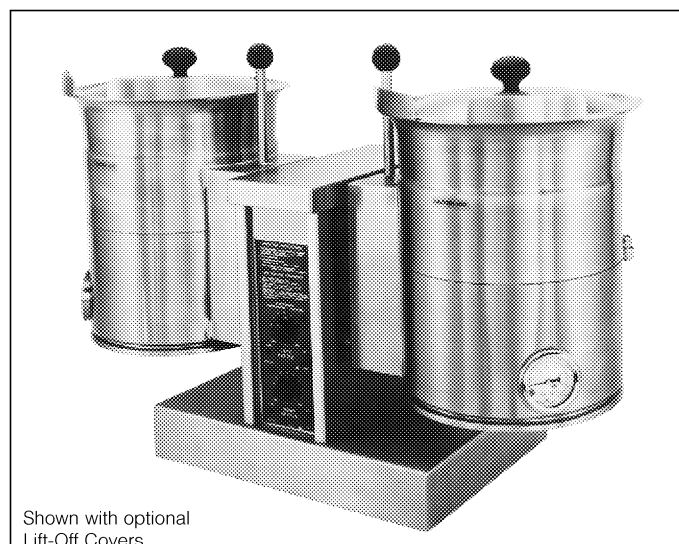
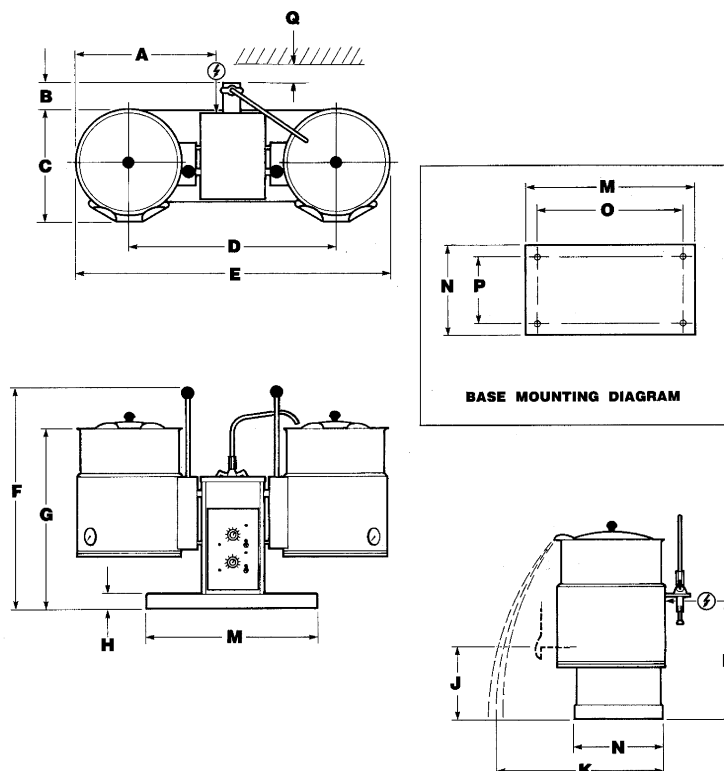
$\frac{2}{3}$  STEAM JACKETED, TILTING

"SPASH PROOF SERIES"

MODELS: ☐ TKET-3-T ☐ TKET-12-T  
☐ TKET-6-T

ITEM NUMBER \_\_\_\_\_

JOB NAME / NUMBER \_\_\_\_\_



Shown with optional  
Lift-Off Covers

### SHORT FORM SPECIFICATION

Shall be CLEVELAND, electric twin kettles, Table Type, self-contained, tilting, Model TKET - \_\_\_\_ - T; \_\_\_\_ gallons each, \_\_\_\_ KW, \_\_\_\_ volts, \_\_\_\_ Hz, 3phase/3 wire or single phase/2 wire; with Solid State Controls for temperature ( $\pm 1^\circ$  C) and Low Water Safety, Large Pouring Lips, Recessed Pressure/Vacuum Gauges, permanently filled Steam Jackets, 50 psi Steam Jacket Ratings and Safety Valves, Lift-Off Covers.

MODEL NO.	GALS.	LITERS		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q
TKET- 3-T	3	11	IN mm	15.75 400	4.38 110	14.00 355	21.00 533	34.50 875	22.63 575	20.00 510	1.50 38	8.25 210	24.00 610	13.75 350	18.00 455	12.50 320	14.50 370	10.00 255	2.25 57
TKET- 6-T	6	23	IN mm	20.75 525	4.38 110	16.75 425	30.00 760	44.00 1120	28.75 730	22.75 580	1.50 38	7.00 180	26.50 675	13.75 350	24.00 610	12.50 320	14.50 370	10.00 255	2.75 70
TKET-12-T	12	45	IN mm	24.25 615	4.38 110	19.50 495	33.00 840	50.63 1285	31.50 800	24.25 615	1.50 38	6.25 160	27.00 685	14.75 375	30.00 762	12.50 320	14.50 370	10.00 255	5.50 140

ELECTRIC ⚡																		WATER 💧💧		CLEARANCE	
ELECTRICAL SUPPLY IN STANDARD WATTAGE (S)★ or HIGH WATTAGE (H)★																		1/2" O.D. copper tube.		RIGHT = 0" LEFT = 0" REAR = See "Q" on chart above	
CAPACITY		208 VOLTS			240 VOLTS			220/380 VOLTS			240/415 VOLTS			480 VOLTS			575 VOLTS				
GALS.	LITERS	★	KW	PH.	AMPS PER PH.	★	KW	PH.	AMPS PER PH.	★	KW	PH.	AMPS PER PH.	★	KW	PH.	AMPS PER PH.	★	KW	PH.	AMPS PER PH.
3	11	S	8.2	1	39.5	S	10.9	1	45.4	S	9.1	1	41.3	S	10.9	1	45.4	-	N/A	N/A	N/A
6	23	S	12.4	1	59.2	S	16.4	1	68.0	S	13.6	3Y	20.6	S	16.4	3Y	22.8	S	19.6	1	41.0
		S	12.4	3	34.6	S	16.4	3	39.4	S	21.8	3Y	33.0	S	26.0	3Y	36.4	S	19.6	3	23.6
		H	19.6	3	54.6	H	26.0	3	63.0												
12	45	S	19.6	1	94.6	S	26.0	1	109.0	S	21.8	3Y	33.0	S	26.0	3Y	36.4	S	26.2	1	54.6
		S	19.6	3	54.6	S	26.0	3	63.0	H	27.2	3Y	41.4	H	32.8	3Y	45.4	S	26.2	3	31.6
		H	24.6	3	68.4	H	32.8	3	78.8												

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## CLEVELAND RANGE KET-T SEQUENCE OF OPERATIONS

1. To turn the unit on, turn the switch to the on position.
  - Power is sent to primary side of the 120vac/16vac transformer.
  - Power is sent to the normally closed high limit.
  - From the high limit power is sent to the normally open contacts of the 12VDC relay.
2. From the secondary of the transformer 16VAC is sent to the controller.
  - Power is sent to the red LED (low water indicator light) from terminal 4 of the controller.
    - If the water probe is grounded through water the LED will go off.
    - If the water probe is not grounded the LED will remain on and the unit will not heat.
  - If the resistance of the thermistor is higher than the setting of the potentiometer( the unit is calling for heat) then 16VDC is sent to the coil of the relay and the green LED (heat indicator light)
  - The 12VDC relay will close until the unit reaches temperature
3. With the contacts of the relay closed, power is sent to the coil of the contactor(s).
  - The contactor(s) close sending the supply voltage to the element(s).
  - The elements will heat causing the water to boil and steam to be generated.
4. The kettle will heat (build pressure) until the controller is satisfied by the thermistor at the setting of the potentiometer.
  - The controller will then turn off the heat circuit until the temperature of the kettle is below the setting.
  - When the temperature drops below the setting the controller will send 12 VDC to the relay and the heat circuit will be energized again.
5. To turn the unit off, place the switch in the off position.
  - Power will be removed from the controller and the heat circuit will de-energize.

## OPERATION OF A SOLID STATE KETTLE

The main difference between a solid state kettle and a conventional kettle is that the solid state kettle uses an electronic thermistor to sense kettle temperature while the conventional kettle uses a mechanical thermostat.

A thermistor is a semiconductor that changes resistance as the temperature changes. As the temperature increases the resistance of the thermistor decreases.

Note the thermistor and the temperature adjusting potentiometer. The resistance of the potentiometer (variable resistor) will determine the desired kettle temperature. In the next few paragraphs, the simplified happenings of the temperature control circuit inside the control box with respect to the thermistor and temperature adjusting potentiometer will be explained.

When the kettle has not reached its desired temperature, the thermistor resistance will be greater than the potentiometer resistance. This will give an output from the temperature control circuit of an electronic “HI”, which simplified equals a closed switch. As the temperature increases, the thermistor resistance will decrease until it equals the potentiometer resistance. At this point, the output of the temperature control circuit will be on electronic “LO”, which simplified equals an open switch.

When power first arrives at the kettle, it passes through the terminal block to one side of the contactors and the 16-volt AC transformer. With the on/off switch in the “on” position, 16 volts AC is provided to the control box at pins 9 and 10. The box converts this to DC and provides 16 volts DC to one side of the 12-volt relay coil.

If the low water cut—off probe is grounded, (submerged in water) it will provide an electronic closed switch inside the control box. If the kettle has not reached its desired temperature (thermistor resistance greater than potentiometer resistance), there will be an electronic closed switch inside the control box to allow current to flow from pin 8 through the 12 volt relay coil and back to pin 6. This will, in turn close the 12-volt relay contacts.

(2)

With the 12-volt relay closed, this now provides power to the contactor coils, therefore closing the contactors.

With the contactors closed, this now provides power to the elements, thus heating up the kettle.

As the temperature of the kettle increases, the thermistor resistance will decrease until it equals the potentiometer resistance. The temperature control circuit will then provide an open electronic switch, removing the closed circuit to the 12-volt relay coil. This will open the relay contacts, therefore opening the contactors and removing power from the elements.

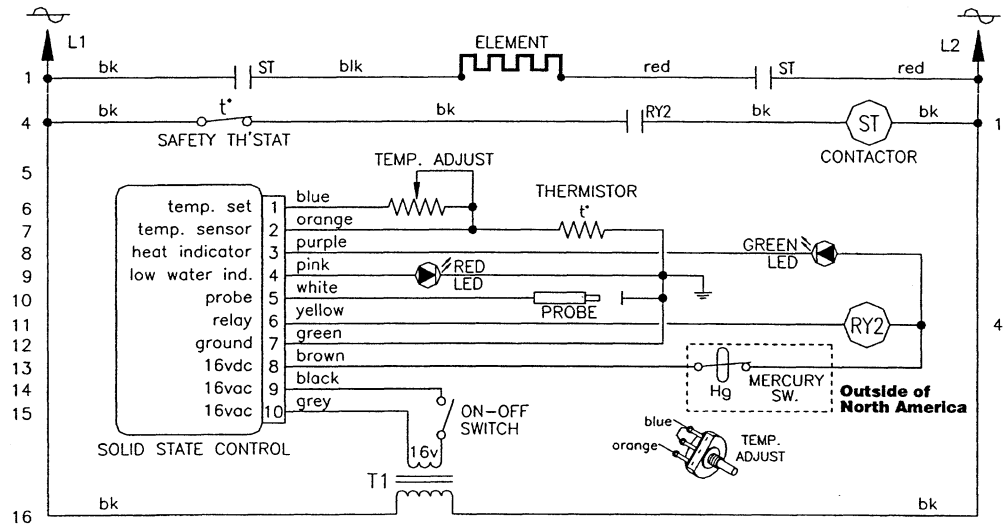
This cycle will repeat itself as required by the kettle temperature.

One important point to remember when troubleshooting; if there is no power going into the control box, there can't possibly be power coming out of the control box. Also, if you have the required power coming out of the control box and the kettle still does not operate, the problem is not the control box, but after it in the circuit.

**WIRING DIAGRAM**  
**3 Gallon Kettles**

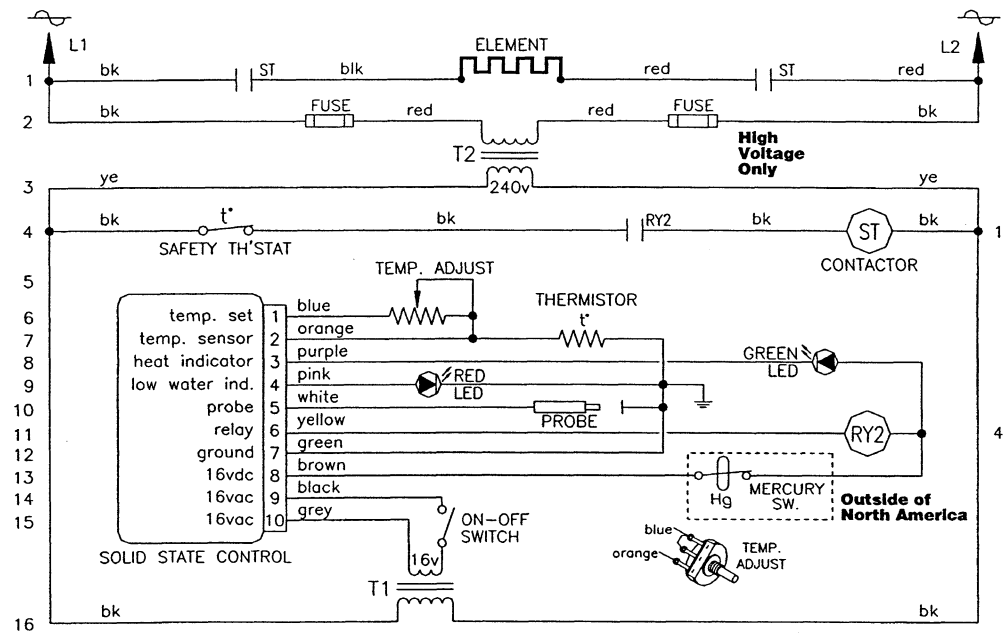
200-240v

Single Phase Only



380-480v

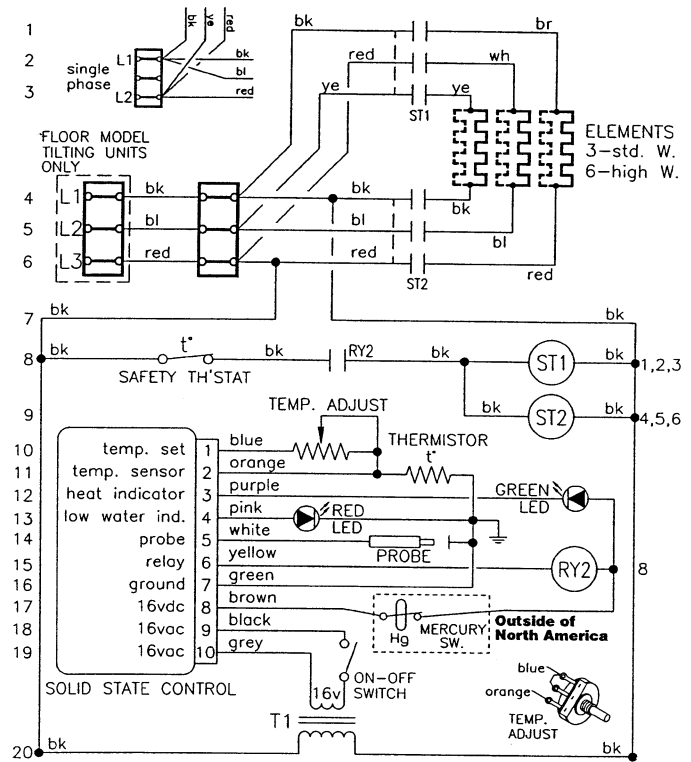
Single Phase Only



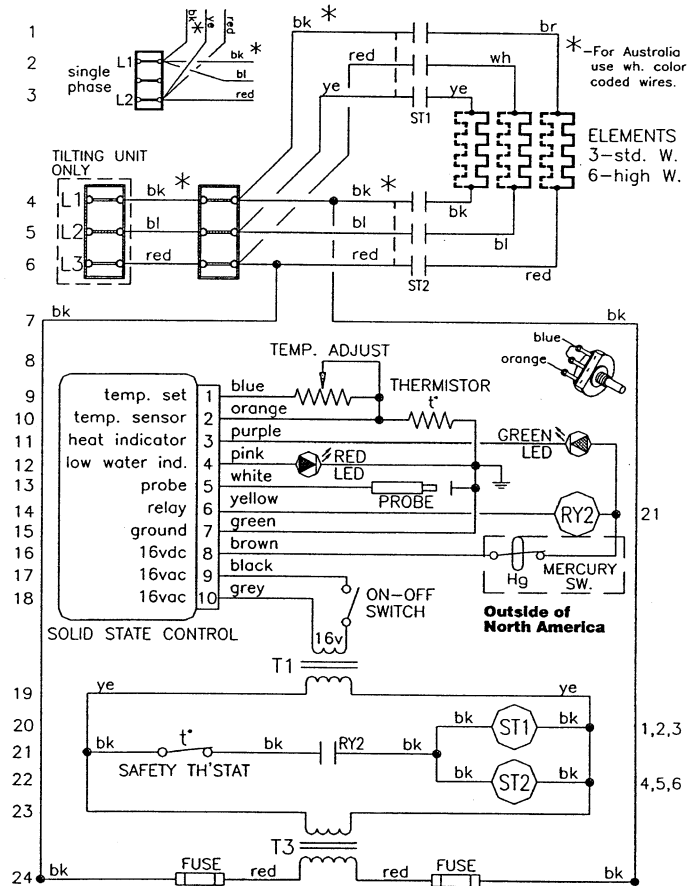
# WIRING DIAGRAM

## 6-20 Gallon

200-240v



380-600v



## OPERATING THE KETTLE

**DO NOT LEAN ON OR PLACE OBJECTS ON KETTLE LIP. SERIOUS INJURY COULD RESULT IF KETTLE TIPPED OVER, SPILLING HOT CONTENTS.**

- Before turning kettle on, read the Vacuum/Pressure Gauge (4). The gauges needle should be in the green zone. If the needle is in the "VENT AIR" zone, refer to the Kettle Venting Instructions (page 19). Any air that may be present will increase cooking times. Once heated, the kettle's normal maximum operating pressure is approximately 10-12 psi, while cooking a water base product.
- Ensure that the electrical service to the kettle is turned on at the fused disconnect switch.

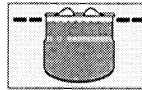
Temperature Control Setting	Approximate Product Temperature	
	°F	°C
1. (Min.)	130	54
2.	145	63
3.	160	71
4.	170	77
5.	185	85
6.	195	91
7.	210	99
8.	230	110
9.	245	118
10. (Max.)	260	127
<b>NOTE:</b> Certain combinations of ingredients will result in temperature variations		

Temperature Range Chart

- Preheat the kettle by turning the ON/OFF Switch/Solid State Temperature Control (1) to the desired temperature setting (see above "Temperature Range Chart"). The Heat Indicator Light (Green) (2) will remain lit, indicating the burner is lit, until the temperature setting is reached. When the green light goes off, the heaters are off, and preheating is complete.

**NOTE:** When cooking egg and milk products, the kettle should not be preheated, as products of this nature adhere to hot cooking surfaces. These types of food should be placed in the kettle before heating is begun.

- Place food product into the kettle. The Heat Indicator Light (Green) (2) will cycle on and off indicating the elements are cycling on and off to maintain the set temperature.



**NOTE:** Do not fill kettle above recommended level marked on outside of kettle.

**NOTE:** The Low Water Indicator Light (Red) (3) should not be lit during kettle operation. This light indicates that the elements have been automatically shut off by the kettle's safety circuit. It is normal for the red light to come on when the kettle is in a tilted position. However, the kettle cannot be operated when the red light remains lit while the kettle is in the upright position. This indicates a low water condition, and water must be added to the reservoir. Refer to Reservoir Fill Procedures on page 19 of this manual for details.

- When cooking is completed place ON/OFF Switch/Solid State Temperature Control (1) to the "OFF" position.
- Pour the contents of the kettle into an appropriate container by tilting the kettle forward. Care should be taken to pour slowly enough to avoid splashing off the product.

**NOTE:** As with cleaning food soil from any cookware, an important part of kettle cleaning is to prevent food from drying on. For this reason, cleaning should be completed immediately after cooked foods are removed. Refer to the Cleaning Instructions (page 6) for detailed kettle washing procedures.

## APPROXIMATE BOILING TIMES

Gals.	Ltrs.	Times in Minutes					
		Standard Wattage			High Wattage*		
		208V	240V	480V	208V	240V	480V
25	95	60	45	60	40	30	30
40	150	60	50	75	40	30	30
60	225	100	75	75	50	40	40
80	300	130	100	100	65	50	50
100	375	160	120	120	80	60	60

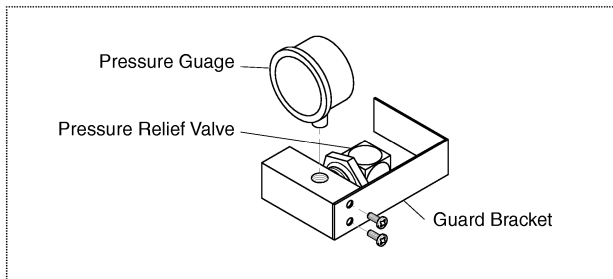
\*High Wattage is only available with 3 phase units.

The accompanying chart shows approximate times required for electric kettles of various capacities to boil water. The ON/OFF Switch/Solid State Temperature Control (1) must be set at "10" (Max.) throughout the heatup period. Water will boil about 1/3 faster if the kettle is filled only to the outer steam jacket's welded seam, resulting in a kettle filled to 2/3 capacity.



## CALIBRATING PROCEDURE

1. Insure the unit has a vacuum before you begin calibrating procedures. If unit requires venting refer to Kettle Venting Instructions on page 19 of this manual.
2. Turn kettle ON and set temperature dial to 10 (Max.).
3. Allow the unit to cycle twice.
4. Check temperature of the inner kettle surface with a digital surface thermometer.
5. Temperature should be between 260° F and 265° F.
6. Using a screw driver adjust temperature by turning the potentiometer on the black box. Turn very little. Turn clockwise to INCREASES and counter-clockwise to DECREASE temperature.
7. Allow the unit to cycle twice.
8. Check temperature of the inner kettle surface with a digital surface thermometer.
9. Repeat steps 4 through 8 until unit is calibrated.



Pressure Relief Valve/Gauge Assembly Drawing

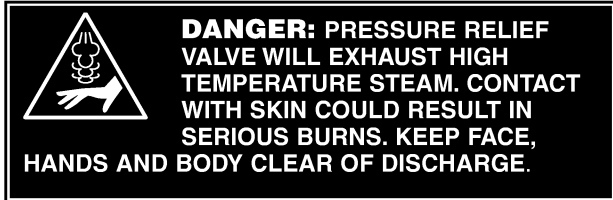
## PRESSURE RELIEF VALVE PERIODIC TESTING PROCEDURE

**WARNING: IMPROPER REFILLING OF KETTLE JACKET WILL RESULT IN IRREVERSIBLE DAMAGE TO UNIT.**

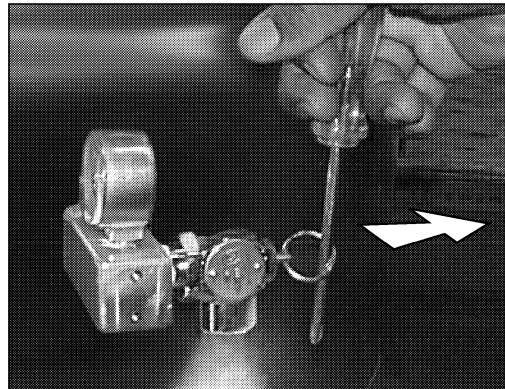
Most insurance agencies require periodic testing of pressure relief valves used on pressure vessels. This procedure will allow you to safely and quickly test your kettle's pressure relief valve. We recommend this test be performed twice a year.

**NOTE:** The following instruction is intended for use by qualified service personnel.

**WARNING:** Kettle surface will be hot and steam will be released during testing. Take necessary precautions including the use of gloves and eye protection to prevent personal injury.



1. Remove guard bracket from pressure relief valve/gauge assembly.
2. With the kettle empty, turn unit ON and set temperature control to 10 (Max.). Allow the kettle to heat until the unit cycles off.
3. Switch unit OFF and disconnect main power at fused disconnect switch.



4. Stand to the side of the pressure relief valve discharge tube and pull valve open for a maximum of one second. Repeat test three to four times. Each time the mechanism should move freely and be accompanied by a rapid escape of steam.
5. Replace guard bracket from pressure relief valve/gauge assembly.

If valve appears to be sticking replace pressure relief valve.

If foreign material is discharged then drain kettle and replace pressure relief valve.

See Reservoir Fill Procedure (page 19) for full instructions on the correct method for refilling kettle jacket.

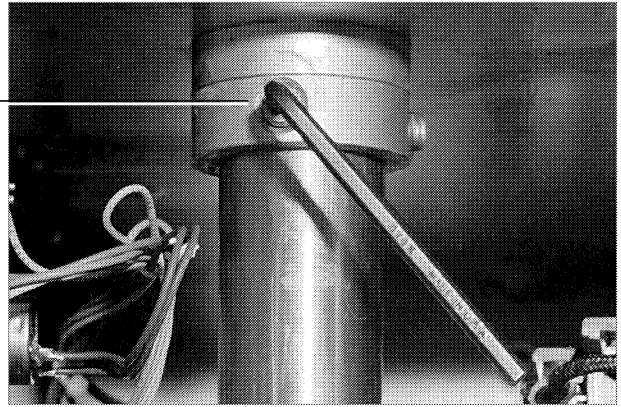
**WARNING:** Improper refilling of kettle jacket will result in irreversible damage to unit.

**NOTE:** Rust inhibitor is purchased locally. Read directions and do not exceed manufacturer's recommendation (excessive rust inhibitor can also cause solidification).

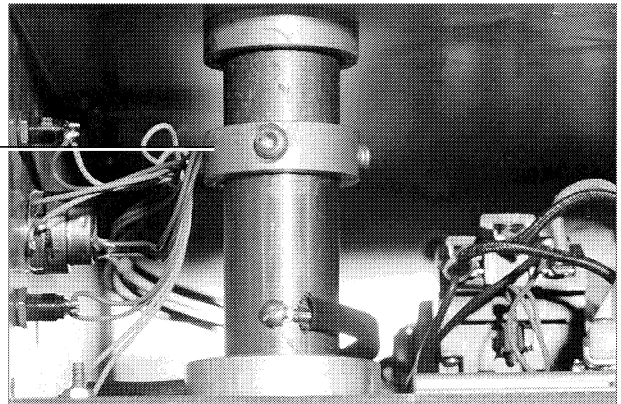
## BEARING LUBRICATING PROCEDURE

**1.** Remove console cover.

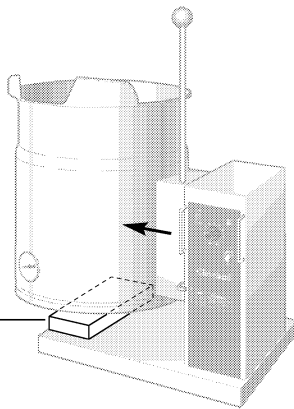
**2.** Loosen two Allen screws on locking ring.



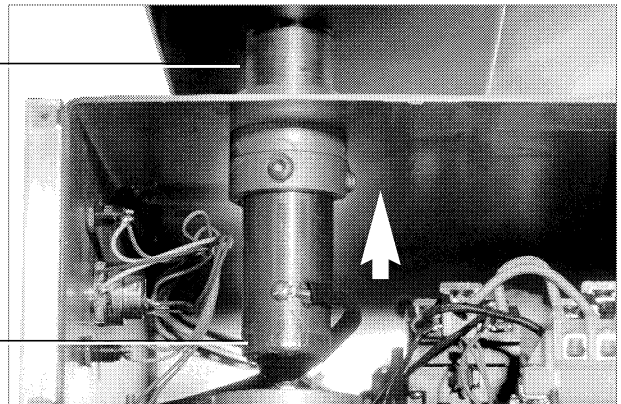
**3.** Pull locking ring to center of trunnion.



**4.** Pull kettle two inches away from console and rest on support block.



**5.** Clean newly exposed sections of trunnion.



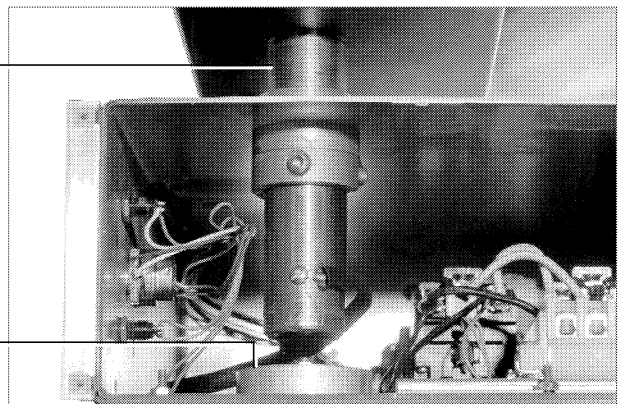
**6.** Grease trunnion between kettle and console.

**7.** Repack outer needle bearing.

**8.** Push kettle back in place.

**10.** Reinstall trunnion and lock collar.

**11.** Replace console cover.





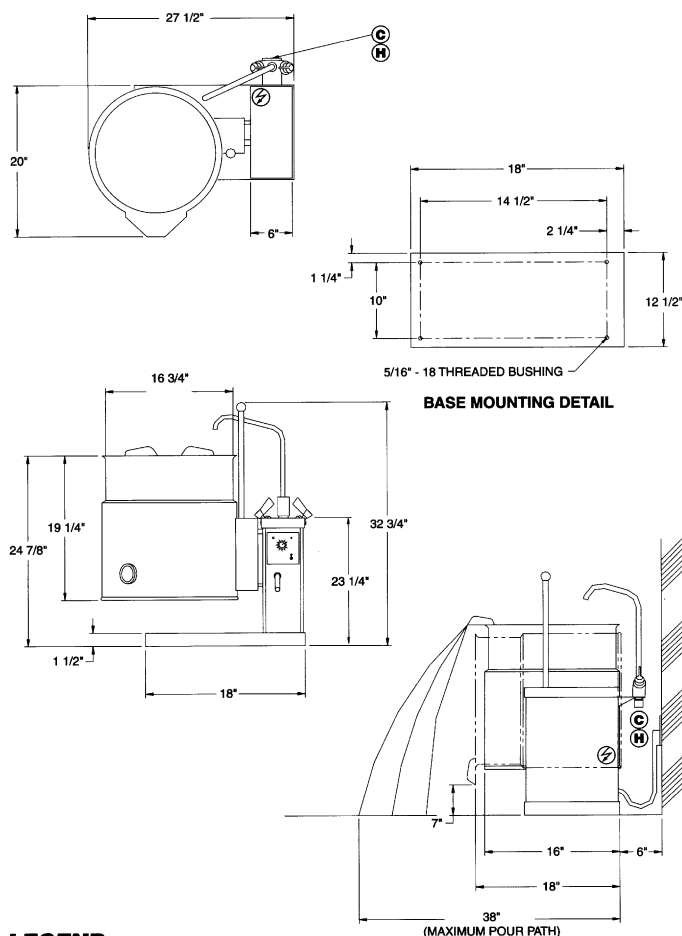
# Steam Jacketed Kettles

## TABLE TYPE, ELECTRIC

SELF-CONTAINED with GEARBOX  
12 GALLON (45 LITERS)  
2/3 STEAM JACKETED, TILTING  
"SPASH PROOF SERIES"

MODELS: KET-12-TGB

### KEL-12-TGB INSTALLATION REQUIREMENTS



### LEGEND

(E) ELECTRICAL SUPPLY (C) COLD WATER (H) HOT WATER

### SPECIFICATIONS

#### ELECTRICAL NOTES:

1. VOLTAGES AVAILABLE: 100-600 VOLTS
2. STANDARD AND HIGH WATTAGE MODELS ARE AVAILABLE

#### CLEARANCES:

RIGHT - 0 LEFT - 0 BACK - 6'

#### SHIPPING WEIGHT:

190 lbs.

### NOTES

UNIT SHOWN WITH OPTIONAL COUBLE PANTRY FAUCET (DPK AND CORD AND PLUG).

**WARNING:** TO PREVENT INJURY KETTLE MUST BE BOLTED TO THE TABLE.

Cleveland Range reserves right of design improvement or modification, as warranted.

ITEM NUMBER \_\_\_\_\_

JOB NAME / NUMBER \_\_\_\_\_



### SHORT FORM SPECIFICATION

Shall be CLEVELAND, Electric Kettle, Table Type, self contained, tilting, Model KET-12-TGB; 12 gallons, \_\_KW, \_\_volt, \_\_Hz, \_\_-phase, 3 wire and single phase, 2 wire. 2/3 Steam Jacketed, Type 304 Stainless Steel kettle and supports. Jacket rated at 50 psi with Safety Valve. Complete with "Splash-Proof" Solid State Water Level, Temperature and Safety Low Water Power Cut-Off, including L.E.D. Indicators. Gear Box. Optional Lift-Off Cover.

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# Steam Jacketed Kettles

## TRI-LEG, ELECTRIC

SELF-CONTAINED

25, 40, 60 or 80 GALLONS

(100, 150, 225 or 300 LITERS)

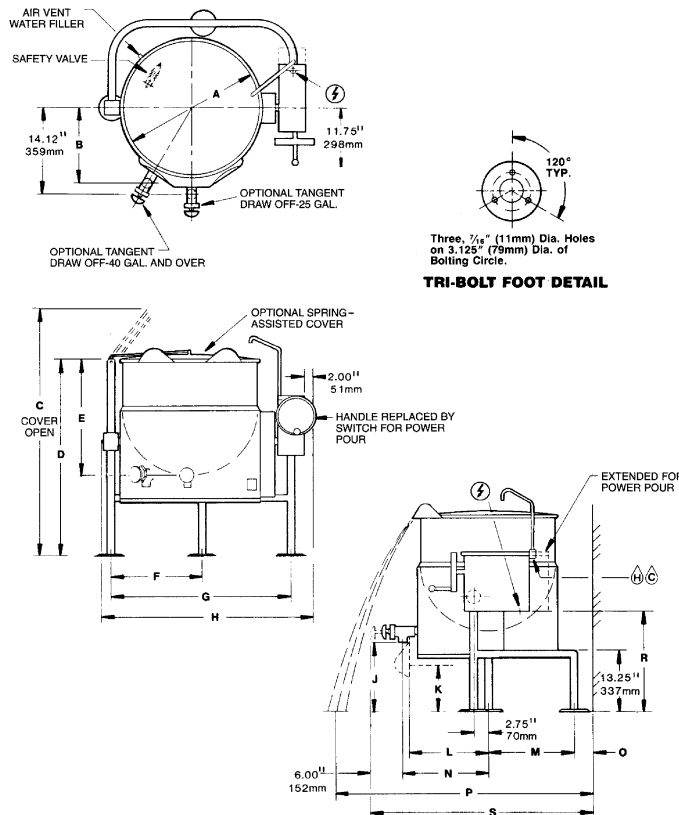
2/3 STEAM JACKETED

TILTING

MODELS: ☐ KEL-25-T ☐ KEL-80-T  
☐ KEL-40-T ☐ KEL-100-T  
☐ KEL-60-T

ITEM NUMBER \_\_\_\_\_

JOB NAME / NUMBER \_\_\_\_\_



Shown with optional Spring-assisted Cover and 2" Tangent Draw-Off Valve

### SHORT FORM SPECIFICATION

Shall be CLEVELAND, Electric Kettle, Tri-leg mounted, self-contained, tilting, Model KEL - \_\_\_\_ - T; \_\_\_\_ gallons, 2/3 Steam Jacketed. Type 304 Stainless Steel Kettle and Supports. 50 psi Steam Jacket Rating; 50 psi Safety Valve; Jacket factory charged with Distilled Water, Corrosion Inhibitor and Antifreeze; with combination Pressure/Vacuum Jacket Gauge. Solid State Temperature and Safety Control System in plug-in Module.

GALS.	LITERS		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S
25	100	IN mm	21.00 533	N/A	60.00 1524	37.50 953	20.50 521	14.38 365	28.50 724	36.19 919	14.50 368	12.75 324	11.62 295	14.50 368	14.00 356	2.75 70	42.75 1086	21.10 536	37.25 946
40	150	IN mm	26.00 660	14.25 362	66.75 1695	39.50 1003	22.50 572	16.81 427	33.62 854	41.19 1046	13.50 343	10.25 260	16.25 413	17.50 445	16.50 419	2.50 64	50.00 1270	20.30 516	42.50 1079
60	225	IN mm	29.50 749	15.88 403	75.25 1911	45.00 1143	26.00 660	18.60 472	37.21 945	44.69 1135	14.50 368	11.25 286	19.00 483	19.00 483	18.25 464	2.50 64	52.00 1321	23.10 587	45.75 1162
80	300	IN mm	33.00 838	17.38 441	81.00 2057	48.00 1219	28.00 711	20.31 516	40.62 1032	48.19 1224	15.50 394	11.50 292	20.00 508	21.50 546	20.00 508	2.50 64	56.00 1422	25.10 638	50.00 1270

**WATER**

3/8" O.D. copper tube or  
1/2" N.P.T. pipe.

When ordered with optional faucet.

		ELECTRIC																	
		NOTE: Dual Voltage of 220 /380 (shown on chart) require a four wire, three phase electrical supply.																	
		ELECTRICAL SUPPLY-STANDARD WATTAGE								HIGH WATTAGE									
		208 V		240 V		220/380 V		480 V		208 V		240V		220/380V		480V			
GALS.	LITERS	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH	KW	AMPS 1PH	AMPS 3PH
25	100	9.8	47.3	27.3	13.0	54.5	31.5	10.9	16.5	9.8	11.8	14.8	41.0	19.6	47.3	16.4	24.8	19.6	23.6
40	150	14.8	70.9	41.0	19.6	81.7	47.3	16.4	24.8	13.1	15.8	24.6	69.0	32.7	78.8	27.3	41.4	33.0	40.0
60	225	14.8	70.9	41.0	19.6	81.7	47.3	16.4	24.8	19.6	23.6	29.5	82.0	39.2	94.5	32.8	49.6	39.2	47.2
80	300	14.8	70.9	41.0	19.6	81.7	47.3	16.4	24.8	19.6	23.6	29.5	82.0	39.2	94.5	32.8	49.6	39.2	47.2

RIGHT = 4.00" handle clearance  
LEFT = .00"  
REAR = See "O" on above chart

Cleveland Range reserves right of design improvement or modification, as warranted.

**Cleveland Range Inc.**

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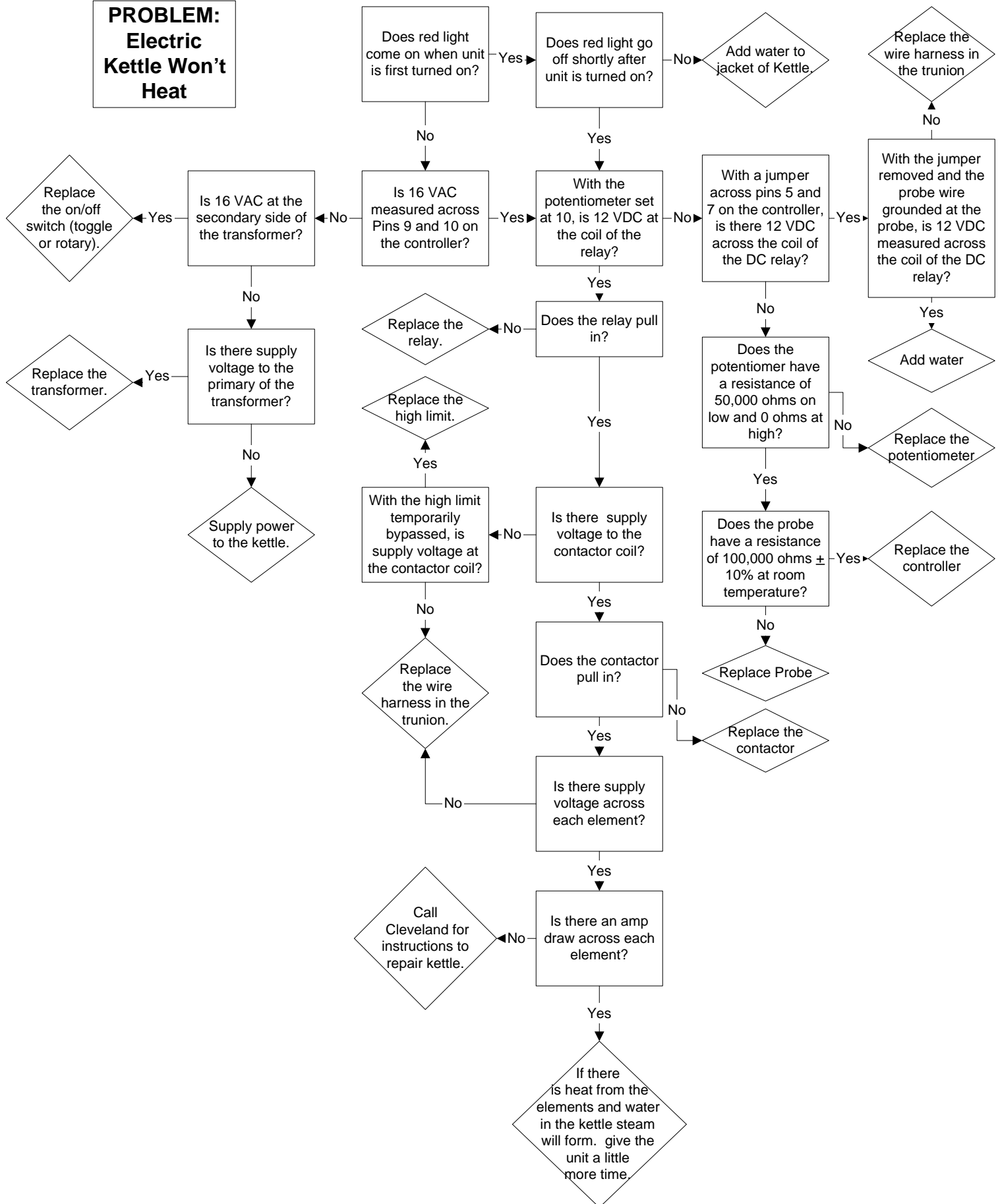
1333 East 179th St., Cleveland, Ohio, U.S.A. 44110

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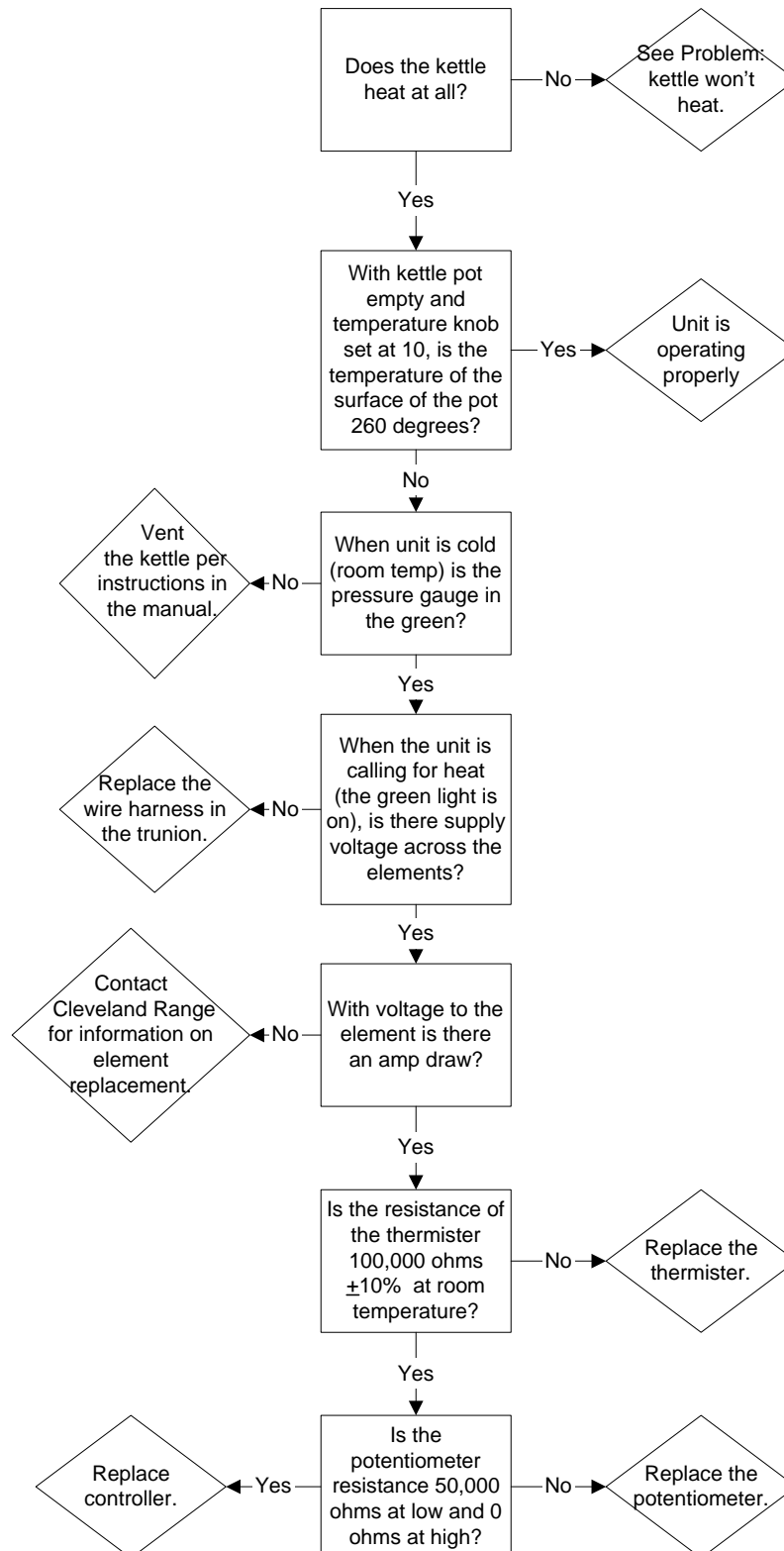
## CLEVELAND RANGE KEL SEQUENCE OF OPERATIONS

1. To turn the unit on, turn the switch to the on position.
  - Power is sent to primary side of the 120vac/16vac transformer.
  - Power is sent to the normally closed high limit.
  - From the high limit power is sent to the normally open contacts of the 12VDC relay.
2. From the secondary of the transformer 16VAC is sent to the controller.
  - Power is sent to the red LED (low water indicator light) from terminal 4 of the controller.
    - If the water probe is grounded through water the LED will go off.
    - If the water probe is not grounded the LED will remain on and the unit will not heat.
  - If the resistance of the thermistor is higher than the setting of the potentiometer( the unit is calling for heat) then 16VDC is sent to the coil of the relay and the green LED (heat indicator light)
  - The 12VDC relay will close until the unit reaches temperature
3. With the contacts of the relay closed, power is sent to the coil of the contactor(s).
  - The contactor(s) close sending the supply voltage to the element(s).
  - The elements will heat causing the water to boil and steam to be generated.
4. The kettle will heat (build pressure) until the controller is satisfied by the thermistor at the setting of the potentiometer.
  - The controller will then turn off the heat circuit until the temperature of the kettle is below the setting.
  - When the temperature drops below the setting the controller will send 12 VDC to the relay and the heat circuit will be energized again.
5. To turn the unit off, place the switch in the off position.
  - Power will be removed from the controller and the heat circuit will de-energize.

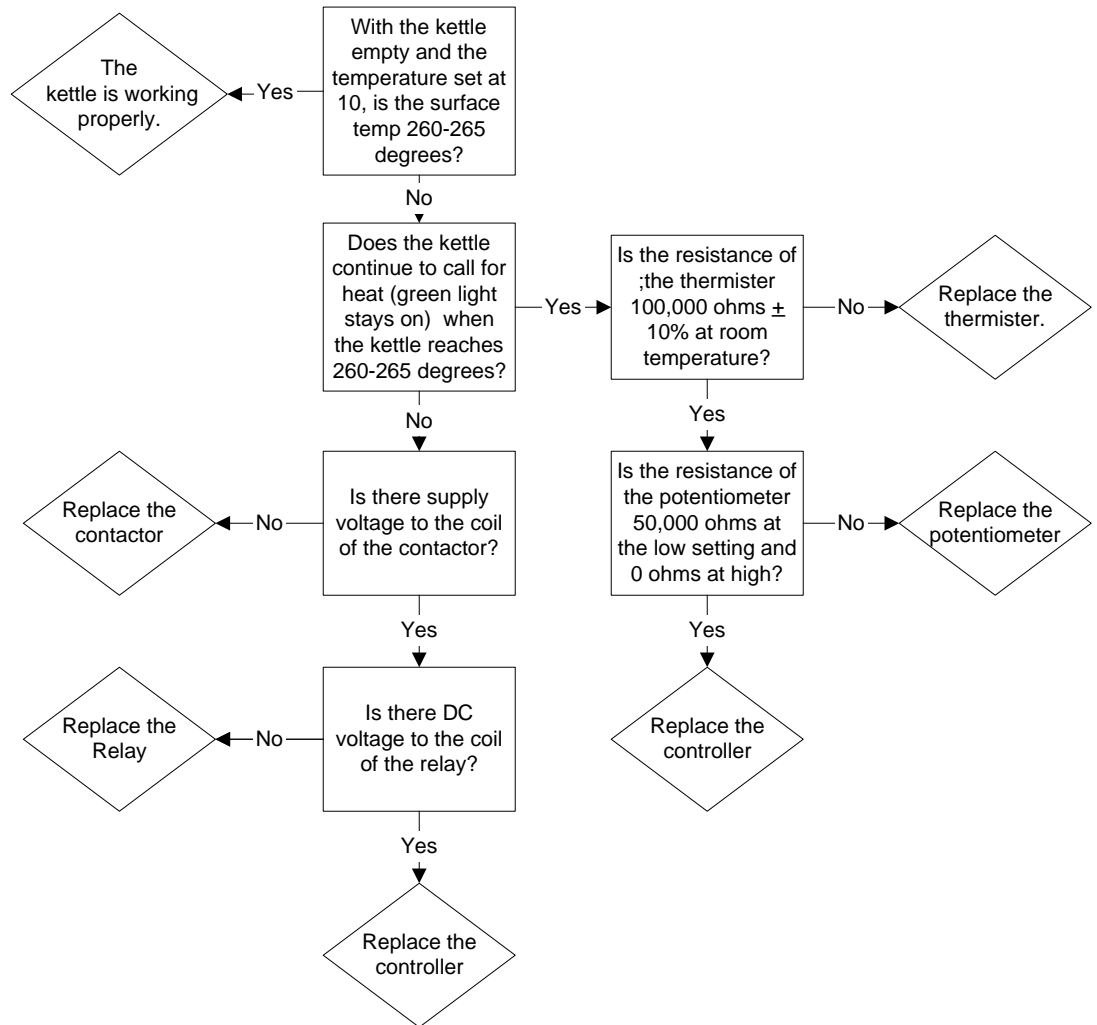
**PROBLEM:  
Electric  
Kettle Won't  
Heat**



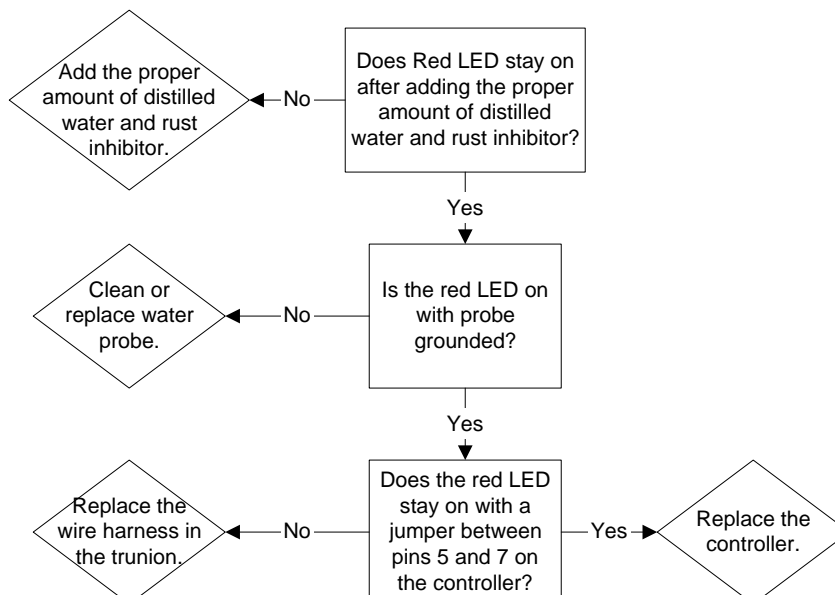
**PROBLEM:**  
**Electric**  
**Kettle Not**  
**Hot Enough**



**PROBLEM:**  
**Electric**  
**Kettle Gets**  
**Too Hot**



**PROBLEM: Red Add Water LED Stays On**





# ELECTRIC KETTLE ELEMENT TEST SHEET



Date: \_\_\_\_ Model #: \_\_\_\_ Serial #: \_\_\_\_

Customer: \_\_\_\_ Service Company: \_\_\_\_

Volts: \_\_\_\_ Phase: \_\_\_\_

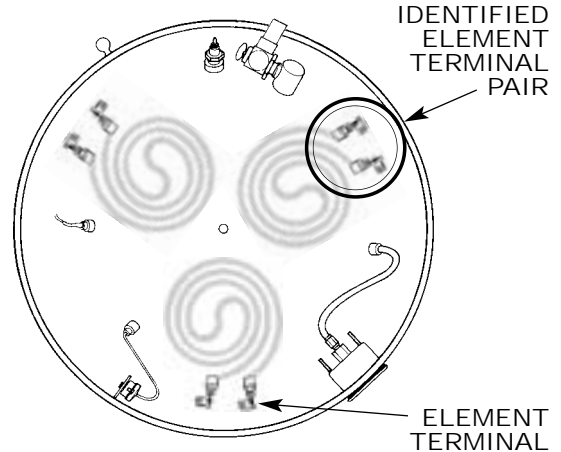
**THIS IS A MANDATORY FORM.**

Once completed, forward this sheet with request for repair.  
You will then be granted Return Authorization.

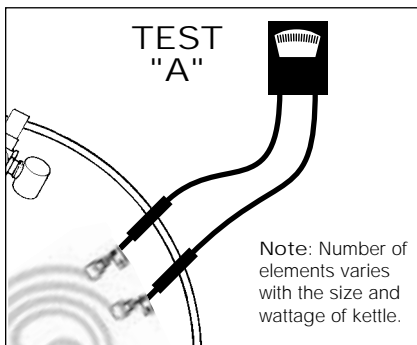
1. Disconnect power at circuit breaker.
2. Secure kettle in tilted position. Remove bottom cover.
3. Kettles may have 1, 3 or 6 elements.  
Each element has two terminals. The element terminal pairs can be identified by the wire colour coding. Locate and mark the element terminal pairs.
4. Disconnect wires from element terminals being careful to prevent excessive bending of element terminal pin.

## **Wire Colour Coding**

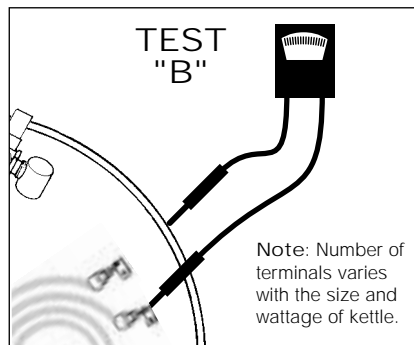
**PAIR(s) #1, 4** . . . Red/Brown  
**PAIR(s) #2, 5** . . . Yellow/Black  
**PAIR(s) #3, 6** . . . White/Blue



## 5. Tests



Note: Number of elements varies with the size and wattage of kettle.



Note: Number of terminals varies with the size and wattage of kettle.

With an OHM meter, measure the resistance across all the pairs of element terminals and record results in boxes below.

1	2	3
4	5	6

Measure resistance between the kettle body (ground) and each element terminal. Record results in boxes below.

- ✓ Yes (resistance is greater than 1 mega ohm)  
✗ No (resistance is less than 1 mega ohm)

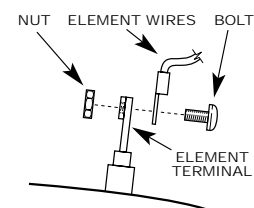
1	2	3	4	5	6
7	8	9	10	11	12

## 6. Results.

You probably have faulty elements if:

- A/ In TEST "A", the resistance is not between 8-140 ohms.  
B/ In TEST "A", elements have substantially different ohm readings.  
C/ In TEST "B", you have recorded any ✗'s.

7. If no elements test faulty, reconnect element wires to terminals as shown using only the original stainless steel nuts and bolts. If necessary remove any corrosion. Tighten firmly to prevent arcing. Replace bottom cover.

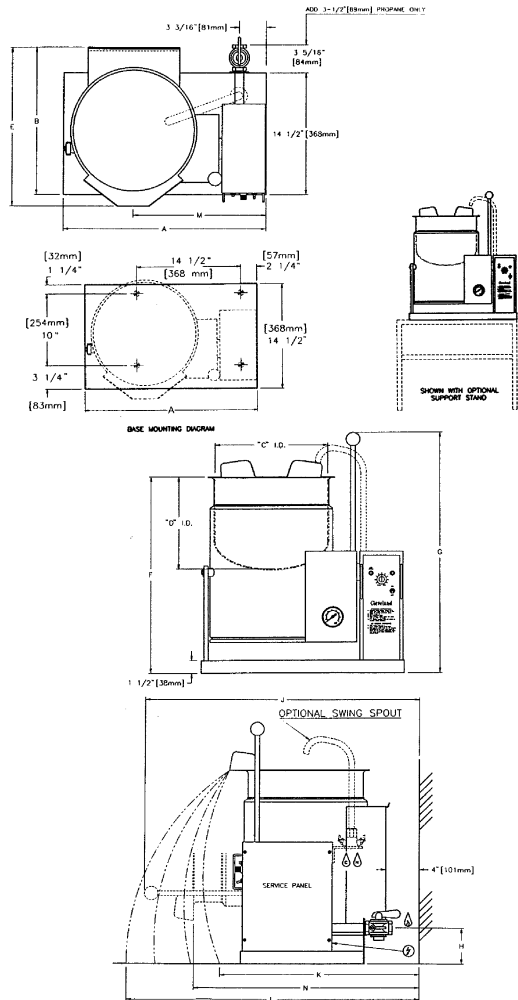




# Steam Jacketed Kettles

## TABLE TOP, GAS

6 OR 12 GALLONS (23 OR 45 LITERS)  
2/3 STEAM JACKETED, TILTING  
"SPLASH PROOF SERIES"



MODELS: ☐ KGT- 6-T  
☐ KGT-12-T

ITEM NUMBER \_\_\_\_\_





JOB NAME / NUMBER \_\_\_\_\_



### SHORT FORM SPECIFICATION

Shall be CLEVELAND, gas kettle, Table Type, self-contained, tilting, Model KGT- \_\_\_\_ -T; \_\_\_\_ gallons, natural or LP gas, 2/3 steam jacketed, type 304 Stainless Steel and supports. Jacket rated at 50 psi with Safety Valve. Complete with solid state water level, temperature, and safety low water power cut off, including LED indicators. Option lift off cover.

KETTLE SIZE			A	B	C	D	E	F	G	H	J	K	L	M	N
GALS.	LITERS														
6	23	INCHES	24	19 1/4	13 3/4	11	18 3/4	23 3/4	28 3/4	4 1/4	32 1/2	24	37	15 3/4	27 1/4
		mm	610	490	340	279	476	594	730	108	826	610	940	400	692
12	46	INCHES	27	20 3/4	16 3/4	14 1/8	23	27	39	5 1/4	43	30	43	16 3/4	31
		mm	686	518	425	357	584	686	991	149	1092	762	1092	419	787

 GAS			 ELECTRIC	  WATER	CLEARANCE
NATURAL	PROPANE	B.T.U. RATING	120V 1 ph  60 hz  6 ft. [1.8m] cord c/w u-ground plug supplied.	1/2" O.D. Copper Tube	RIGHT = 0"
piping: 3/4" NPT.	piping: 3/4" NPT.	6 gal. 34,000			LEFT = 0"
Supply pressure: 4.5" W.C. minimum 14.00" W.C. maximum	Supply pressure: 11.00" W.C. minimum 14.00" W.C. maximum	12 gal. 53,000			REAR = 4" [102cm]
Manufacturer must be notified if unit will be operated above 2,000 ft. [610m] altitude.					

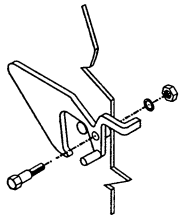
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## CLEVELAND RANGE KGT-T SEQUENCE OF OPERATIONS

1. To turn the unit on, turn the switch to the on position.
  - Power is sent to primary side of the 120vac/16vac transformer.
  - Power is sent to the normally closed high limit.
  - From the high limit power is sent to the normally open contacts of the 12VDC relay.
2. From the secondary of the transformer 16VAC is sent to the controller.
  - Power is sent to the red LED (low water indicator light) from terminal 4 of the controller.
    - If the water probe is grounded through water the LED will go off.
    - If the water probe is not grounded the LED will remain on and the unit will not heat.
  - If the resistance of the thermistor is higher than the setting of the potentiometer( the unit is calling for heat) then 16VDC is sent to the coil of the relay and the green LED (heat indicator light)
  - The 12VDC relay will close until the unit reaches temperature
3. With the contacts of the relay closed, power is sent to the 24 VAC transformer.
  - The transformer sends 24 VAC to the ignition module.
  - The ignition module will send spark to the igniter and 24 VAC to the gas valve.
    - With 24VAC to the gas valve the valve opens and gas is sent to the burner.
    - Spark and gas together cause ignition.
    - When this happens and the module reads at least 0.7 micro amps DC within 4 seconds, the unit will heat causing the water to boil and steam to be generated.
      - If the module does not see the 0.7 micro-amps in 4 seconds, the module will try again in 15 seconds. It will try 3 times then lock out.
4. The kettle will heat (build pressure) until the controller is satisfied by the thermistor at the setting of the potentiometer.
  - The controller will then turn off the heat circuit until the temperature of the kettle is below the setting.
  - When the temperature drops below the setting the controller will send 12 VDC to the relay and the heat circuit will be energized again.
5. To turn the unit off, place the switch in the off position.
  - Power will be removed from the controller and the heat circuit will de-energize.

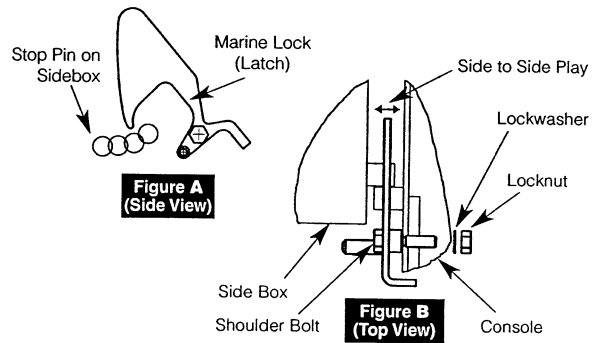


## MARINE LOCK TESTING PROCEDURE

1. Check that lock clears stop pin on side box without rubbing when kettle is tilted (Figure A).
2. Check side to side play. Lock should remain fully over stop pin when pushed to it's maximum side to side play (Figure B).
3. Check that the kettle when pushed fully upright moves the lock to a closed position. To check this:

**A/** Hold the latch firmly in the unlocked position while tilting the kettle back to an upright position.

**B/** The kettle sidebox will force the lock into a new position.

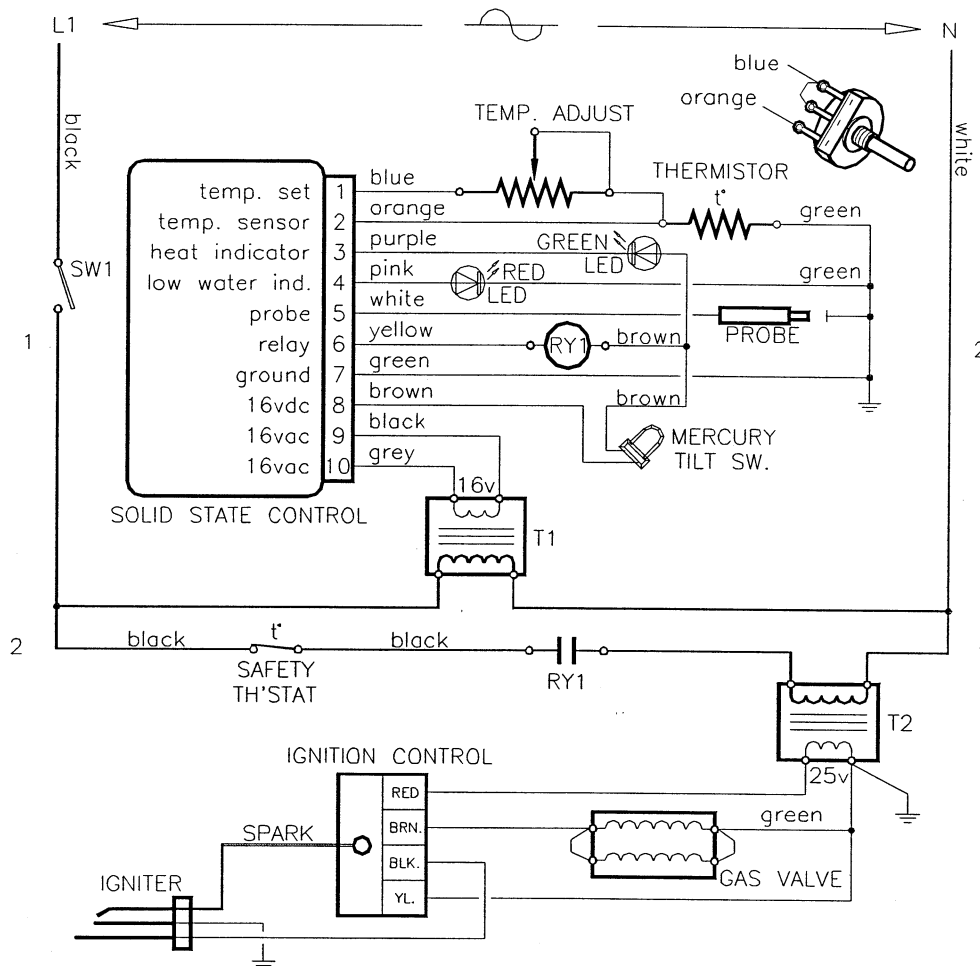


**C/** Hold the lock in this position and try to tilt the kettle forward. The latch should prevent the kettle from tilting.

**4.** Check shoulder bolt is firmly seated against console body.

**5.** Check on inside of console box that shoulder bolt locknut is secure.

## WIRING DIAGRAM



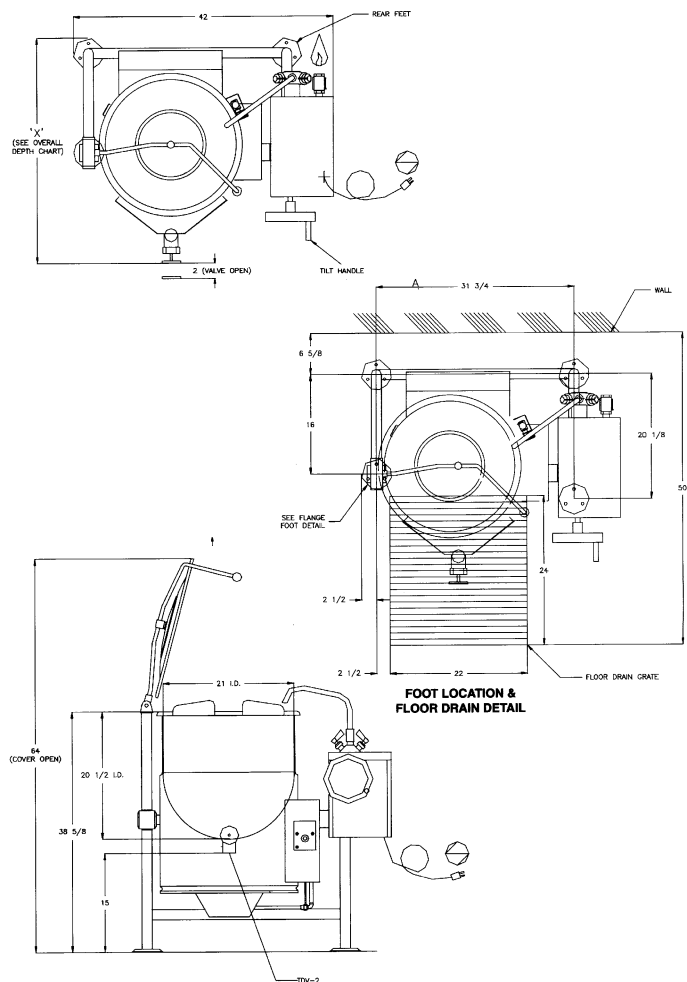


# Steam Jacketed Kettles

## GAS-FIRED TILTING, LEG-TYPE

2/3 STEAM JACKETED  
25 GALLONS (100 LITERS)

### KGL-25-T INSTALLATION REQUIREMENTS



UNIT SHOWN WITH OPTIONAL TDV-2, SPRING ASSIST COVER AND DOUBLE PANTRY FAUCET.

### NOTES

1. MANUFACTURER MUST BE NOTIFIED IF UNIT WILL BE OPERATING ABOVE 2,000 FOOT ALTITUDE.
2. CONSULT FACTORY FOR MANUFACTURED GAS.
3. ALL VERTICAL DIMENSIONS SHOWN ARE MINIMUM. FEET ARE ADJUSTABLE TO 1 INCH MAXIMUM.
4. UNIT COMES WITH 6' POWER CORD.

### SPECIFICATIONS

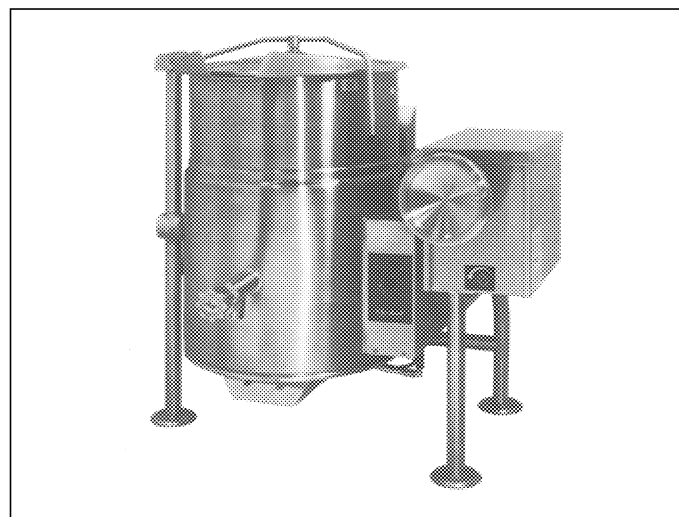
MODEL	⚡ ELECTRICAL SUPPLY:				💧 GAS SUPPLY:				(PIPING 3/4 NPT)				APPROVALS				CLEARANCE:	SHIPPING WEIGHT
	VOLTS	PHASE	AMPS	FREQ	TYPE	BTU RATING	WATER COLUMN	BTU PER CU. FT.	SUPPLY PRESSURE	AGA	CGA	CE MARK	NSF					
KGL-25-T	120	1	5	60	NAT	90,000	4.2	1000	4" TO 14" W.C.	✓	✓		✓	RIGHT: 0 inches LEFT: 0 inches	320 LBS.			
	120	1	5	60	LP	90,000	10	2500	4" TO 14" W.C.	✓	✓		✓	REAR: 4 inches				
	220	1	3	60	NAT	90,000	4.2	1000	4" TO 14" W.C.				✓	ALLOW 12" SPACE MINIMUM ON RIGHT SIDE FOR SERVICE				
	220	1	3	60	LP	90,000	10	2500	4" TO 14" W.C.				✓					

Cleveland Range reserves right of design improvement or modification, as warranted.

MODELS: KGL-25-T

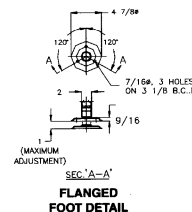
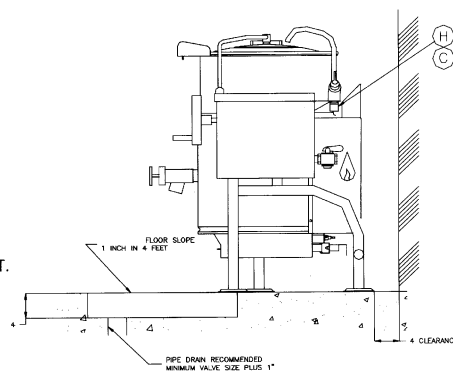
ITEM NUMBER \_\_\_\_\_

JOB NAME / NUMBER \_\_\_\_\_



### SHORT FORM SPECIFICATION

Shall be CLEVELAND, Gas-Kettle, self-contained, tilting, Model KGL-25-T; 25 gallons, natural or LP gas, 2/3 Steam Jacketed, Type 304 Stainless Steel and supports. Jacket rated at 50psi with Safety Valve. Complete with "Splash-Proof" Solid-State Water Level, Temperature, and Safety Low Water Power Cut-Off, including L.E.D. Indicators for Heat Cycle and Low Water Warning.



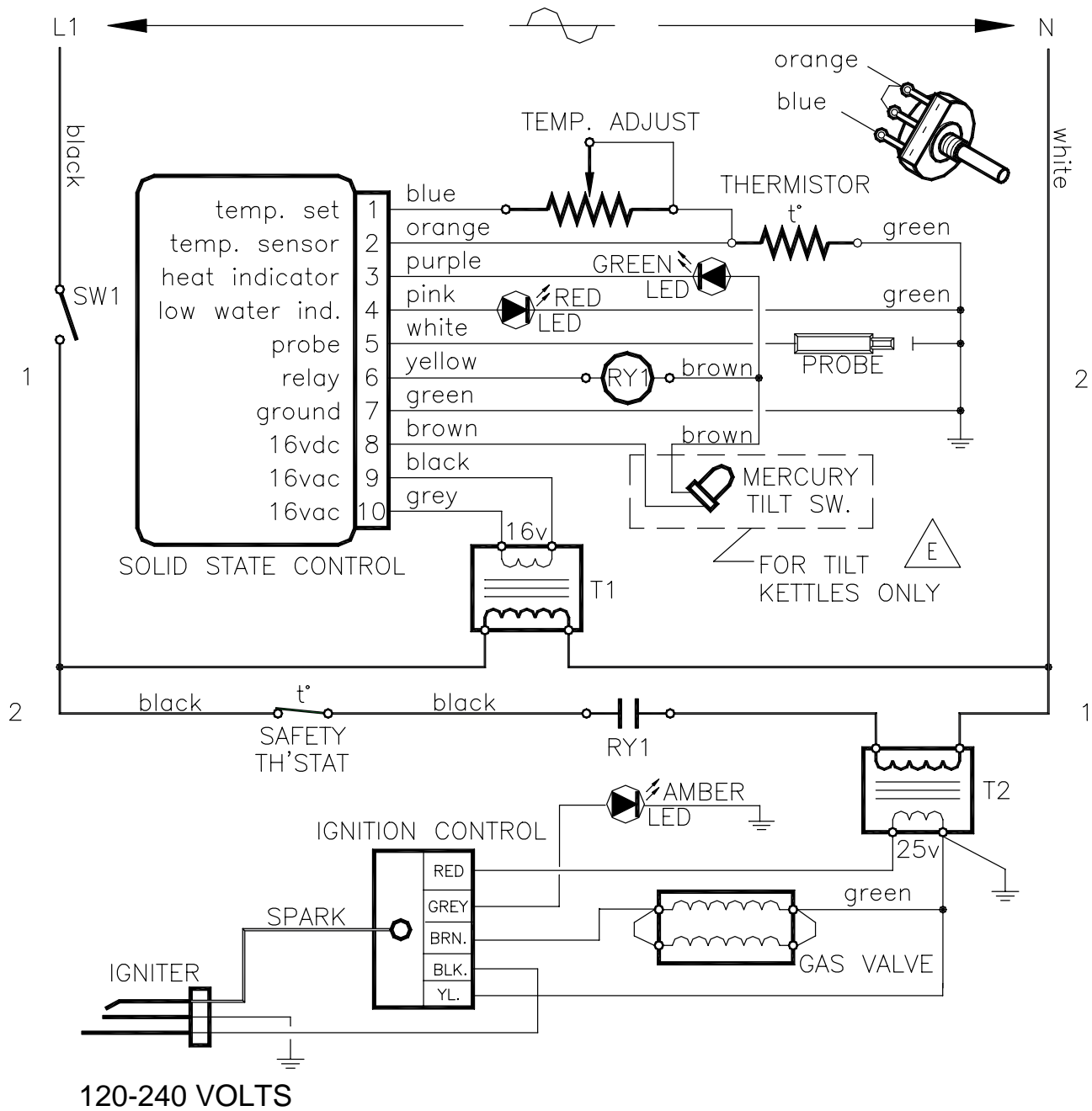
**Cleveland Range Inc.**  
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## CLEVELAND RANGE KGL-25 SEQUENCE OF OPERATIONS

1. To turn the unit on, turn the switch to the on position.
  - Power is sent to primary side of the 120vac/16vac transformer.
  - Power is sent to the normally closed high limit.
  - From the high limit power is sent to the normally open contacts of the 12VDC relay.
2. From the secondary of the transformer 16VAC is sent to the controller.
  - Power is sent to the red LED (low water indicator light) from terminal 4 of the controller.
    - If the water probe is grounded through water the LED will go off.
    - If the water probe is not grounded the LED will remain on and the unit will not heat.
  - If the resistance of the thermistor is higher than the setting of the potentiometer( the unit is calling for heat) then 16VDC is sent to the coil of the relay and the green LED (heat indicator light)
  - The 12VDC relay will close until the unit reaches temperature
3. With the contacts of the relay closed, power is sent to the 24 VAC transformer.
  - The transformer sends 24 VAC to the ignition module.
  - Ignition module sends 24 VAC to the Amber LED
  - The ignition module will send spark to the igniter and 24 VAC to the gas valve.
    - With 24VAC to the gas valve the valve opens and gas is sent to the burner.
    - Spark and gas together cause ignition.
    - When this happens and the module reads at least 0.7 micro amps DC within 4 seconds, the Amber light will go out and the 24 VAC will remain on the gas valve.
      - The unit will heat causing the water to boil and steam to be generated.
      - If the module does not see the 0.7 micro-amps in 4 seconds, the module will try again in 15 seconds. It will try 3 times then lock out.
4. The kettle will heat (build pressure) until the controller is satisfied by the thermistor at the setting of the potentiometer.
  - The controller will then turn off the heat circuit until the temperature of the kettle is below the setting.
  - When the temperature drops below the setting the controller will send 12 VDC to the relay and the heat circuit will be energized again.
5. To turn the unit off, place the switch in the off position.
  - Power will be removed from the controller and the heat circuit will de-energize.

WIRING DIAGRAM





# Steam Jacketed Kettles

## LEG TYPE, GAS-FIRED

### TILTING

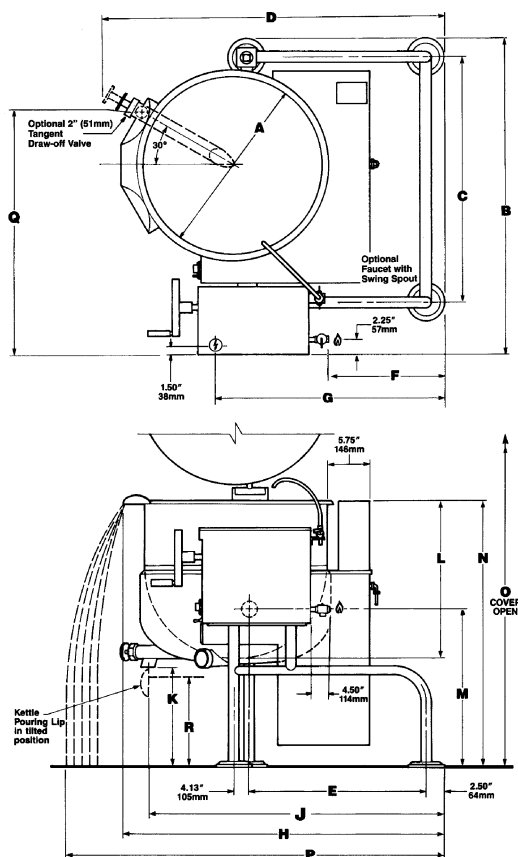
40, 60, OR 80 GALLONS  
(150, 225 or 300 LITERS)

$\frac{2}{3}$  STEAM JACKETED

MODELS: ☐ KGL-40-T ☐ KGL-80-T  
☐ KGL-60-T

ITEM NUMBER \_\_\_\_\_








JOB NAME / NUMBER \_\_\_\_\_



### SHORT FORM SPECIFICATION

Shall be CLEVELAND, Gas-Fired Tilting Kettle, Model KGL-\_\_\_\_ T; \_\_\_\_ gallons,  $\frac{2}{3}$  Steam Jacketed, Power Burner Heating System, Insulated Heat Exchanger, 50 psi Steam Jacket Rating. Infinite Variable Temperature Control, L.E.D. indicators for Heat Cycle and Low Water Warning, Automatic Ignition System.

KETTLE SIZE			A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
GALS.	LITERS																		
40	151	INCHES	26.00	45.75	35.75	44.50	19.00	9.00	24.00	42.25	38.00	15.75	22.50	23.37	40.50	69.75	51.50	35.00	9.50
		mm	660	1162	908	1130	483	229	610	1073	965	400	572	594	1029	1772	1308	889	241
60	227	INCHES	29.50	49.38	39.38	48.00	22.00	11.75	27.00	46.50	41.50	15.50	26.00	24.50	43.50	73.50	68.00	37.00	9.0
		mm	749	1254	1000	1219	559	298	686	1181	1054	394	660	622	1105	1867	1727	940	229
80	303	INCHES	33.00	53.00	43.00	51.00	25.00	14.75	30.00	51.00	44.50	13.75	28.00	25.00	44.75	82.00	74.50	39.00	9.75
		mm	838	1346	1092	1296	635	375	762	1296	1130	349	711	635	1137	2083	1892	991	248

 GAS				 ELECTRIC		   WATER		CLEARANCE	
NATURAL		PROPANE		B.T.U. RATING		  ½" dia. Soft Copper Tubing (each)  When ordered with optional faucet.		RIGHT = 0" LEFT = 0" REAR = 0"  Allow 6.00" space minimum from rear and sides when located near combustible walls.	
Piping: ¾" N.P.T.	Piping: ¾" N.P.T.	40 gal.	140,000						
Supply pressure:	Supply pressure:	60 gal.							
4.00" W.C. minimum	11.00" W.C. minimum	80 gal.	190,000						
14.00" W.C. maximum	14.00" W.C. maximum	100 gal.							
Manufacturer must be notified if unit will be operated above 2,000 ft. altitude.						120V-1 Phase, 60 Hz, 10 amps			

Cleveland Range reserves right of design improvement or modification, as warranted.

**Cleveland Range Inc.**

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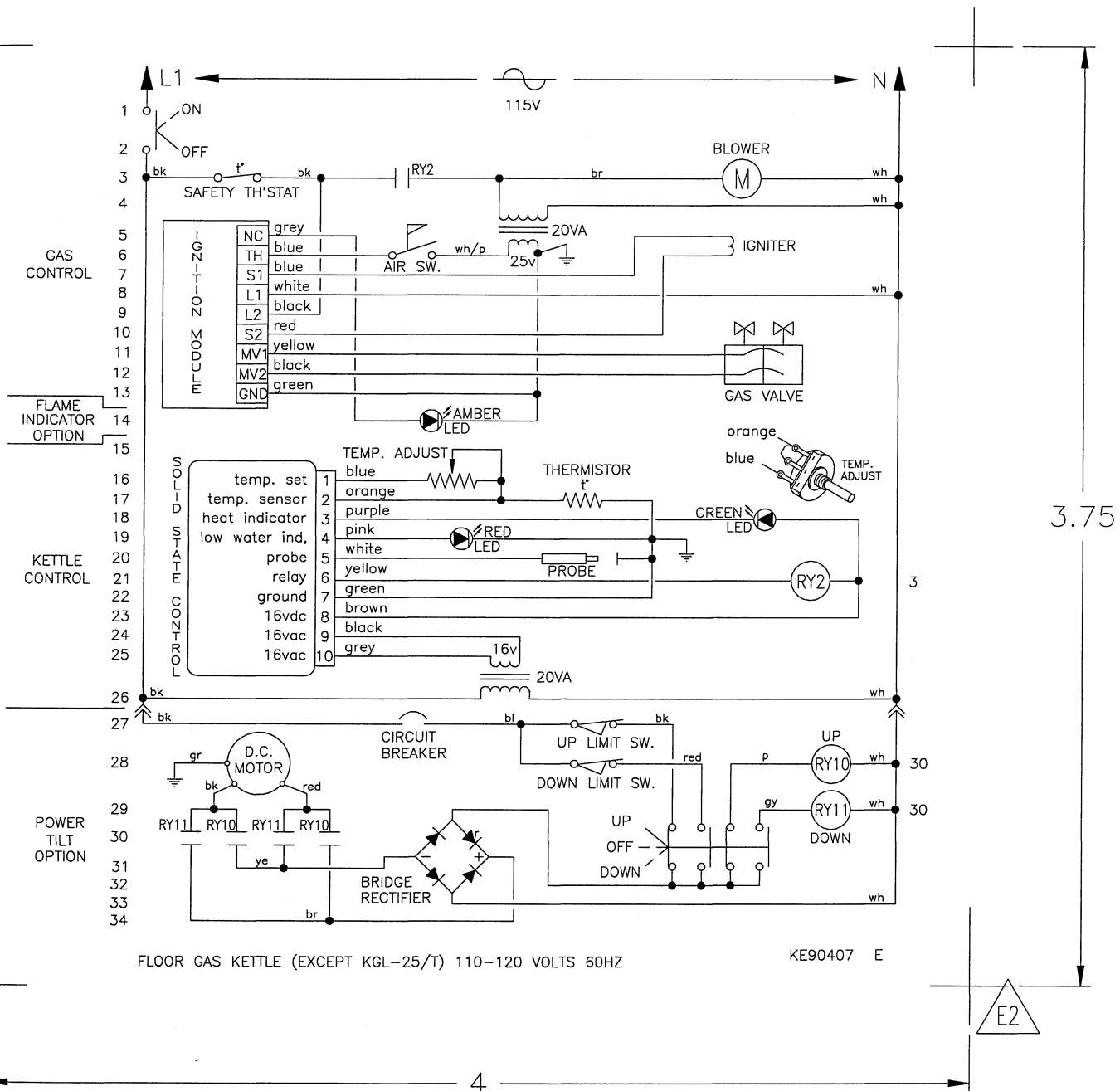
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## CLEVELAND RANGE KGL 40+ SEQUENCE OF OPERATIONS

1. To turn the unit on, turn the switch to the on position.
  - 115 VAC is sent to primary side of the 120vac/16vac transformer.
  - 115 VAC is sent to the normally closed high limit.
  - From the high limit 115 VAC is sent to the normally open contacts of the 12VDC relay and the L1 and L2 terminals of the ignition module.
2. From the secondary of the transformer 16VAC is sent to the controller.
  - 12 VDC is sent to the red LED (low water indicator light) from terminal 4 of the controller.
    - If the water probe is grounded through water the LED will go off.
    - If the water probe is not grounded the LED will remain on and the unit will not heat.
  - If the resistance of the thermistor is higher than the setting of the potentiometer( the unit is calling for heat) then 16VDC is sent to the coil of the relay and the green LED (heat indicator light)
  - The 12VDC relay will close until the unit reaches temperature
3. With the contacts of the relay closed, 120VAC is sent to the blower and primary coil of the 120VAC/24VAC transformer.
  - From the secondary of the 24VAC transformer 24 VAC is sent to the normally open contacts of the air switch.
  - When the air from the blower closes the air switch, 24VAC is sent to the Th terminal of the ignition module.
4. With both 120VAC (at L1 and L2) and 24VAC (at Gnd and Th) to the ignition module then 120VAC will be sent to the surface igniter.
5. After the ignition module has been energized for 24 seconds the module will send 24VAC to the gas valve.
  - The gas will touch the hot igniter and ignite within 4 seconds. If the module does not detect flame in 4 seconds, 24 VAC is removed from the gas valve. Module then locks out.
  - The kettle will build pressure until the controller is satisfied by the thermistor at the setting of the potentiometer.
  - The controller will then turn off the heat circuit until the temperature of the kettle is below the setting.

E1	MATERIAL CHANGES FOR IN HOUSE PRODUCTION	20/04/2001
E2	DIMENSIONAL CHNGES FOR IN HOUSE PRODUCTION	20/04/2001

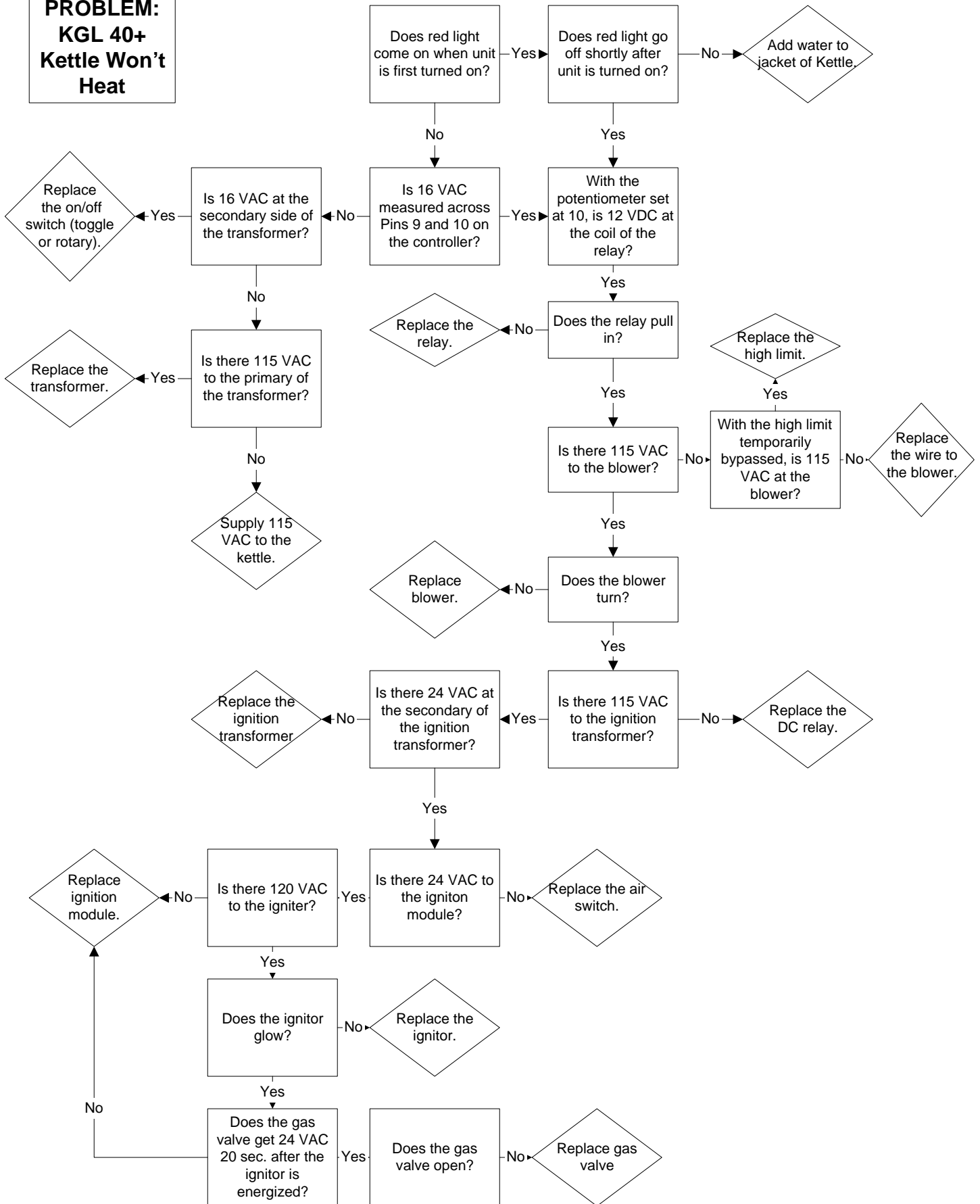


KGL-100, KGL-40-T, KGL-60-T, KGL-80-T

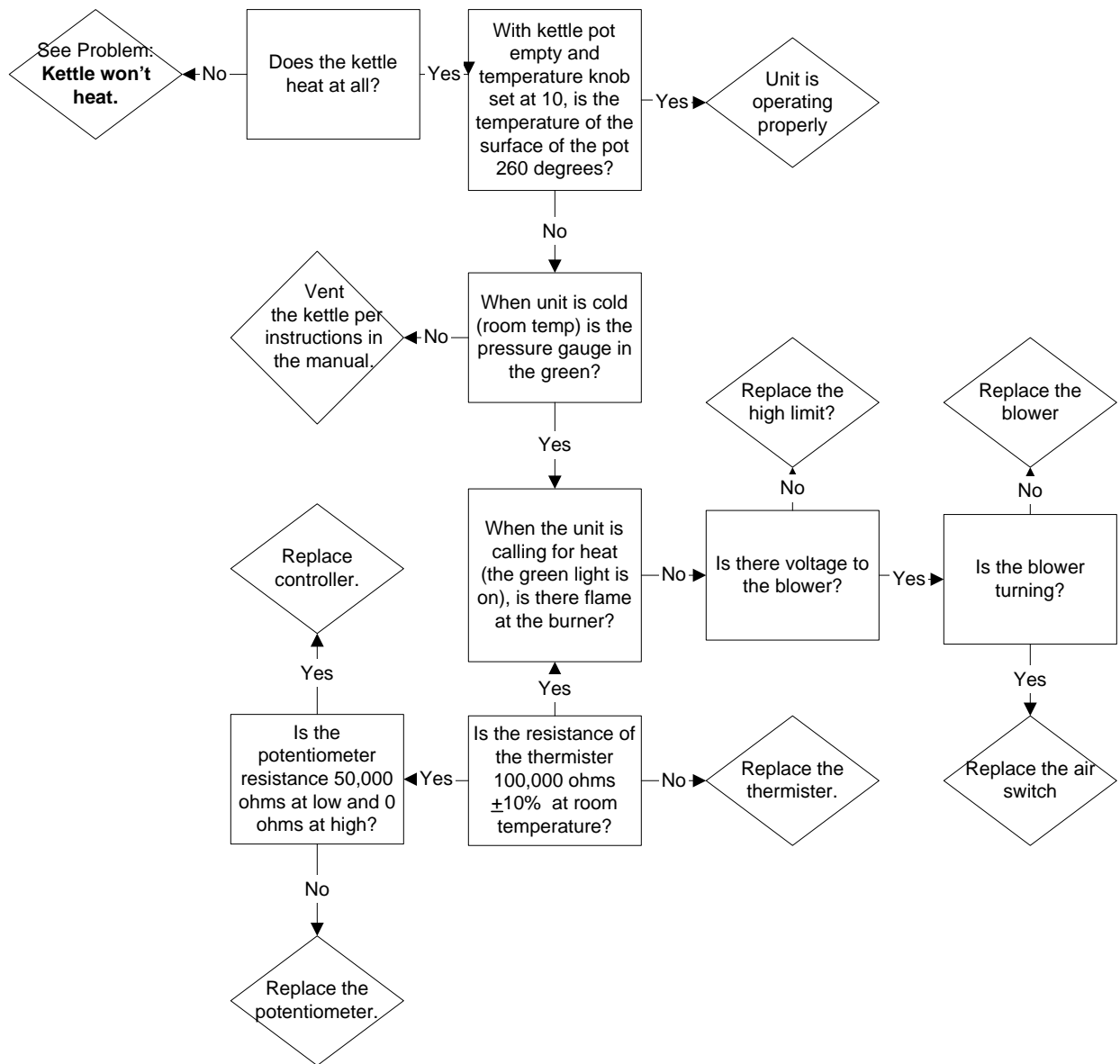
AGRAM (KGL / KGL-T)  
(115V)

REV. No.	REV. DATE	DESCRIPTION	DRAWING No.	REVISION
E	07/12/2001	3785	KE90407	E
D	01/19/2000	3291		
C	09/24/1999	2717		
B	10/08/1996	ECN 2437		
A	01/03/1991	RELEASED	SCALE NONE	
			ISSUE DATE 07/12/2001	DRAWN BY KYM

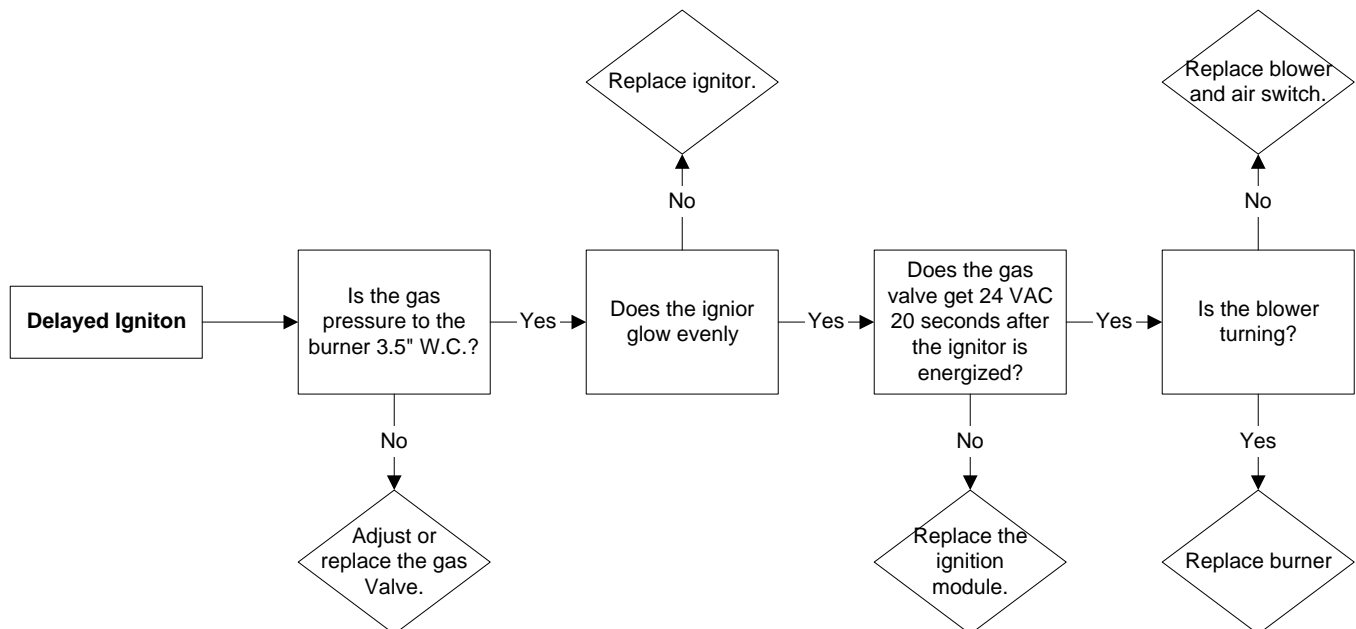
**PROBLEM:  
KGL 40+  
Kettle Won't  
Heat**



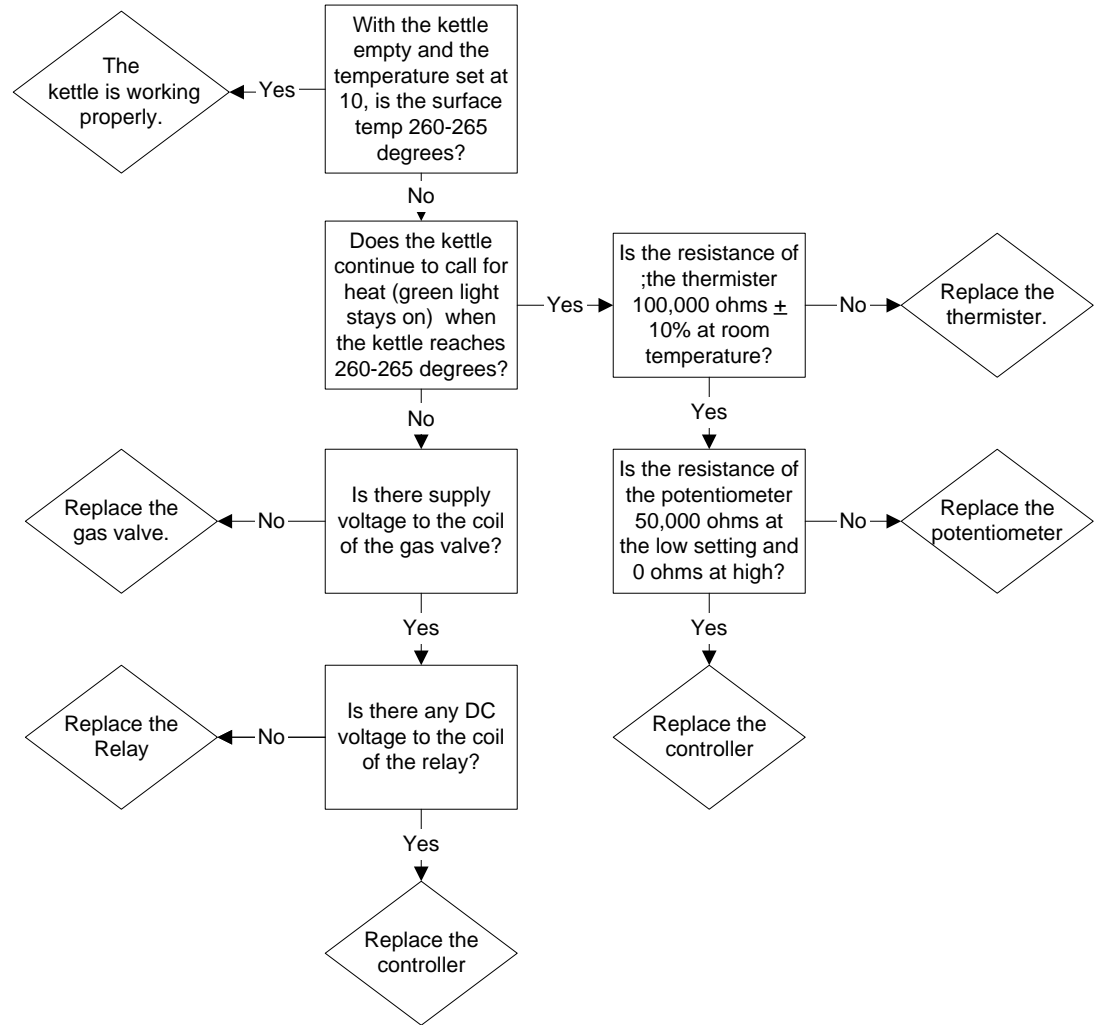
**PROBLEM:**  
**KGL 40+**  
**Kettle Not**  
**Hot Enough**



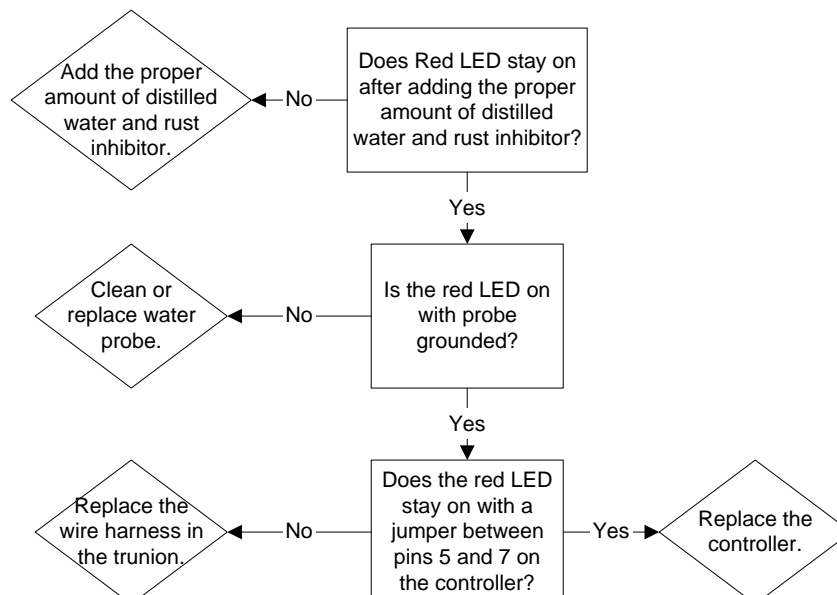
**PROBLEM: KGL 40+ Kettle Has Delayed Ignition**



**PROBLEM:  
KGL 40+  
Kettle Gets  
Too Hot**



**PROBLEM: Red Add Water LED Stays On**



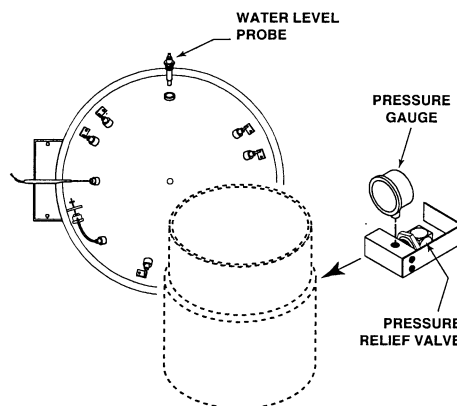
## VACUUM LEAK TEST PROCEDURE

If the kettle will not hold vacuum, test for leaks at:

- A.** Water Level Probe (Remove bottom cover).
- B.** Pressure Relief Valve.      **C.** Pressure Gauge.

### LEAK TEST PROCEDURE:

1. Heat kettle until unit cycles off.
2. Shut off power to the kettle at the fused disconnect switch.
3. Spread Bubble Type Leak Detector over suspected area and watch closely for bubbles.
4. Repair areas as required.



## REPAIRING LEAKS IN STEAM JACKETED KETTLE FITTINGS

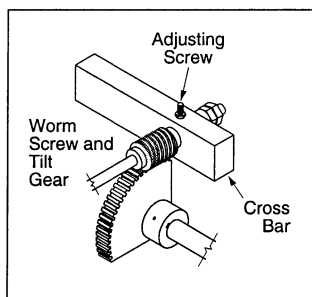
If unit will not hold a vacuum the most likely cause is a leak at one of the fittings.

Often, the easiest way to eliminate a leak is reseal the suspect areas.

1. Water Level Probe      Remove, clean threads, apply teflon thread sealant and reinstall.
2. Pressure Relief Valve      **A/** Inspect for signs of leaks. Replace if required.  
    **B/** Remove, clean threads, apply teflon thread sealant and reinstall.
3. Pressure Gauge      **A/** Inspect face of gauge. If it contains moisture on the inside of face replace.  
    **B/** Remove, clean threads, apply teflon thread sealant and reinstall.

## LUBRICATION PROCEDURE

Lubricate the following parts every three months to insure smooth operation and reduce wear.

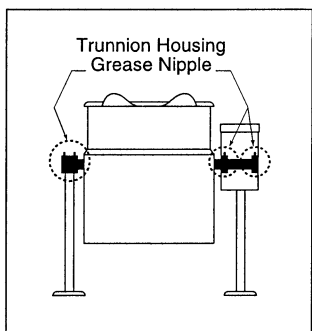


### TRUNNION HOUSING, WORM SCREW AND TILT GEAR

These parts are accessed through the top cover of the console.

Apply grease to gear teeth. Check for

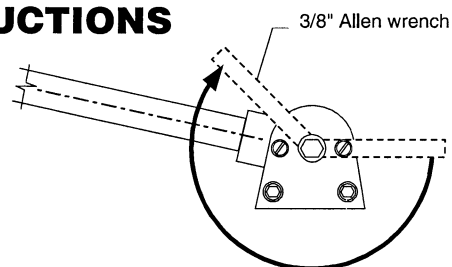
excessive play and adjust with adjusting screw located on top of cross bar.



### KETTLE TRUNNIONS

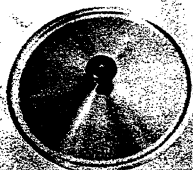
On the left hand side of the kettle there are two grease nipples on the top back portion of the trunnion housing. On the right hand side of the kettle you must remove the console cover to access the two grease nipples.

## HINGE ADJUSTMENT INSTRUCTIONS



1. Insert 3/8" Allen wrench.
2. Turn clockwise to relieve tension on spring.
3. While tension is released remove one of the two slotted screws.
4. To prevent Allen wrench from springing back abruptly while the second slotted screw is removed, insert a pin (approximately 1/8") in the hole where the first slotted screw was removed from.
5. Remove second slotted screw.
6. While holding Allen wrench remove pin.
7. Turn Allen wrench clockwise to tighten or counter-clockwise to loosen tension to produce desired effect.
8. Re-insert pin in one of the two holes.
9. Tighten one slotted screw in the other hole (it may be necessary to turn Allen wrench slightly to align holes).
10. Remove pin and repeat step number 9 for other slotted screw.

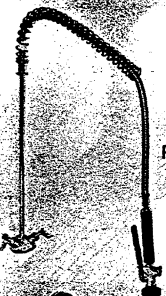
# Cleveland Kettle Steam Jacketed Accessories Kettles



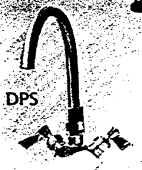
CL20



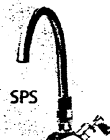
MTP80



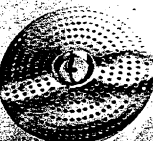
PRSK



DPS



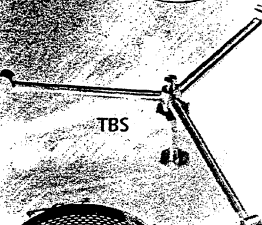
SPS



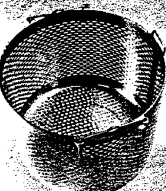
DS2



DS2S



TBS



BS6

Model #	Part Number/Description	Price
<b>Lift-Off Covers</b>		
CL1	Oyster Kettle, Lift-Off Cover	\$265
CL6	6 Gallon Lift-Off Cover	\$265
CL12	12 Gallon Lift-Off Cover	\$350
CL20	20 Gallon Lift-Off Cover	\$390
CL25	25 Gallon Lift-Off Cover	\$580
CL40	40 Gallon Lift-Off Cover	\$670
CL60	60 Gallon Lift-Off Cover	\$760
CL80	80 Gallon Lift-Off Cover	\$880
CL100	100 Gallon Lift-Off Cover	\$990

## Two-Piece Covers Mixer Kettles

MTP12	12 Gallon Two-Piece Cover	\$1,880
MTP20	20 Gallon Two-Piece Cover	\$1,880
MTP40	40 Gallon Two-Piece Cover	\$2,410
MTP60	60 Gallon Two-Piece Cover	\$2,410
MTP80	80 Gallon Two-Piece Cover	\$2,410
MTP100	100 Gallon Two-Piece Cover	\$2,410
MTP125	125 Gallon Two-Piece Cover	\$2,410
MTP150	150 Gallon Two-Piece Cover	\$2,410
MTP200	200 Gallon Two-Piece Cover	P.O.A.

## Faucets

SPK	Single Pantry Faucet	\$300
DPK	Double Pantry Faucet	\$330
SKFK	Single Pantry Kettle Filler with 60" Hose (P/N 105978)	\$670
DKFK	Double Pantry Kettle Filler with 60" hose (P/N 105979)	\$860
PRSK	Double Pantry Pre-Rinse Spray Hose (P/N 105980)	\$910
FBKT	Faucet Bracket-Tilting Kettles (P/N KE54159)	\$120

## Steam Control Kit

SCK1	Steam Control Kit-Direct Steam Stationary Kettle	\$550
SCK2	Steam Control Kit-Direct Steam Tilting Kettle	\$550
SCK3	Steam Control Kit-Direct Steam Stationary Kettle 200 Gallon and larger	\$550

Price includes: Steam Trap, Condensate Strainer, Check Valve

## Drain Strainers & Hooks

SH(* )G	Drain Strainer Hooks-* Specify Gallon Size	\$190
DS2	2" Tangent Draw Off Drain Strainer 3/16" Holes	\$200
DS3	3" Tangent Draw Off Drain Strainer 3/16" Holes	\$200
DSB2	2" Butterfly Valve Drain Strainer 3/16" Holes	\$270
DSB3	3" Butterfly Valve Drain Strainer 3/16" Holes	\$270
MKDS2	2" Mixer Kettle Drain Strainer 1/4" Holes	\$230
MKDS3	3" Mixer Kettle Drain Strainer 1/4" Holes	\$230
"S"	Add suffix "S" for Solid Drain Cover (Priced the same as above)	

## Baskets & Basket Systems

BS3	3 Gallon S/S Cooking Basket	\$ 470
BS6	6 Gallon S/S Cooking Basket	\$ 490
BS12	12 Gallon S/S Cooking Basket	\$ 630
TBS25	Tri Basket System- 25 Gallon Kettle (3BS3)	\$1,780
TBS40	Tri Basket System- 40 Gallon Kettle (3BS6)	\$1,780
TBS60	Tri Basket System- 60 Gallon Kettle (3BS6)	\$2,180
TBS80	Tri Basket System- 80 Gallon Kettle (3BS12)	\$2,180
TBS100	Tri Basket System-100 Gallon Kettle (3BS12)	\$2,180

[illegible]